

## **Updated Remedial Investigation**

Federal Way Link Extension Parcel FL358  
Y Pay Mor Drycleaner Site  
2210 South 320<sup>th</sup> Street  
Federal Way, Washington

*for*  
**Sound Transit**

October 20, 2023



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1101 South Fawcett Avenue, Suite 200  
Tacoma, Washington 98402  
253.383.4940

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**File No. 4082-039-03**

**October 20, 2023**

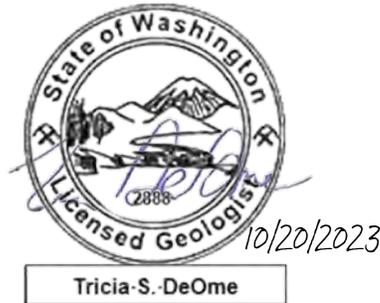
Prepared for:

Sound Transit c/o South County Transit Partners  
401 South Jackson Street  
Seattle, Washington 98104-2826

Attention: Susan Penoyar

Prepared by:

GeoEngineers, Inc.  
1101 South Fawcett Avenue, Suite 200  
Tacoma, Washington 98402  
253.383.4940



Katy R. Ataktürk, LG  
Environmental Geologist

Tricia S. DeOme, LG, LHG  
Senior Environmental Geologist

Dana Carlisle, PE  
Principal

KRA:TSD:DLC:ch

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## ABBREVIATIONS AND ACRONYMS

AO	Administrative Order
bfgs	below the former ground surface
bgs	below the current ground surface
BOD	biological oxygen demand
CDF	controlled density fill
cells/mL	cells per milliliter
cis-DCE	cis-1,2-dichloroethene
CLARC	Cleanup Levels and Risk Calculations
COCs	Contaminants of Concern
CSM	conceptual site model
CVOC	chlorinated volatile organic compounds
DHC	dehalococoides
Ecology	Washington State Department of Ecology
ESA	Environmental Site Assessment
FS	feasibility study
ft/day	feet per day
FWLE	Federal Way Link Extension
GAC	granulated activated carbon
mg/kg	milligrams per kilogram
mg/L	milligrams per liter
MTCA	Model Toxics Control Act
NAVD88	North American Vertical Datum of 1988
NFA	No Further Action
NPDES	National Pollutant Discharge Elimination System
OSG	O'Neill Service Group
PCE	tetrachloroethene
PCULs	Preliminary Cleanup Levels
PID	photoionization detector
ppm	parts per million
RC	restrictive covenant
RCW	Revised Code of Washington
RI	remedial investigation
ROW	Right-of-Way
Site	Y Pay Mor Cleaners
SVE	soil vapor extraction

SVS	soil vapor survey
SWI	Shannon & Wilson Inc.
TCE	trichloroethene
TEE	terrestrial ecological evaluation
TOC	total organic carbon
TOD	transit oriented development
trans-DCE	trans-1,2-dichloroethene
µg/L	microgram per liter
USGS	United States Geological Survey
VCP	Voluntary Cleanup Program
VI	vapor intrusion
VOC	volatile organic compound
WAC	Washington Administrative Code

## 1.0 INTRODUCTION

This report presents the Remedial Investigation (RI) for the “Y Pay Mor Drycleaner” Site located at 2210 South 320<sup>th</sup> Street in Federal Way, Washington (also referred to as “Y Pay Mor Cleaners” or “Site”). The Site is identified in Washington State Department of Ecology (Ecology) databases as Facility Site ID Number 2518 and Cleanup Site ID Number 3180. The Y Pay Mor Site is located on King County Parcel No. 2423200050, identified by Sound Transit as Federal Way Link Extension (FWLE) Parcel FL358 (Parcel FL358). Parcel FL358 was acquired by Sound Transit in 2020 and is situated within the new Federal Way Downtown Station and new surrounding ROW of the Sound Transit FWLE Project.

The Y Pay Mor Cleaners was a commercial dry cleaning business that occupied “Space A-6” in the easternmost portion of the former Best Shopping Plaza (subsequently renamed SeaTac Plaza) building from approximately 1985 to 1992 (RZA AGRA 1992). Two spills of the dry cleaning solvent tetrachloroethene (PCE) occurred inside the Y Pay Mor Cleaners store in 1991 and were reported to Ecology. Subsurface investigations conducted at the Site in 1992 identified PCE and PCE breakdown products in soil and groundwater in the area of the 1991 spills. Investigations conducted in 2020 identified a second PCE source area near a stormwater catch basin in the loading dock area north of the former dry cleaner space. Interim actions were completed at the Site in 1993/1994 and in 2020. In 2021, GeoEngineers prepared a Remedial Investigation Work Plan (GeoEngineers 2021) that was approved by Ecology in January 2022, and implemented between June 2022 and March 2023.

Sound Transit is completing an independent cleanup at the Y Pay Mor Site in accordance with the requirements of Model Toxics Control Act (MTCA), Revised Code of Washington (RCW) 70A.305 and Chapter 173-340 Washington Administrative Code [WAC]). The Site is enrolled in Ecology’s Voluntary Cleanup Program (VCP).

The purpose of a RI is to collect sufficient data and information to define the extent of contamination, characterize the Site, and evaluate cleanup action alternatives in the feasibility study (FS). A Preliminary RI was completed in 1992 by RZA AGRA Inc. documenting conditions at the Site before interim actions were conducted. This updated RI describes historical dry cleaner operations and spills, Site environmental and ecological conditions and land uses, RI findings to date regarding the nature and extent of contamination, preliminary cleanup levels (PCULs), and the conceptual site model (CSM). Supplemental groundwater monitoring and well installation is planned in the future to evaluate groundwater geochemical parameters and seasonal and temporal trends in groundwater conditions and groundwater quality. The additional data are anticipated to sufficiently characterize the Site for the purpose of completing the FS and selecting a preferred cleanup action. The supplemental RI report will be prepared following the completion of supplemental groundwater monitoring and will incorporate the new data.

## 2.0 REGULATORY HISTORY AND CURRENT FRAMEWORK

The Site is identified in Ecology's cleanup sites database as "Y Pay Mor Drycleaner" (alternate name "Sea Tac Plaza"), Cleanup Site ID 3180, Facility Site ID 2518. Sound Transit is conducting a cleanup of the Site under MTCA. Sound Transit purchased the FL358 Parcel in 2020. Sound Transit enrolled in Ecology's VCP (No. NW3265) in Spring 2020<sup>1</sup>.

Based on investigations and interim actions in the 1990s, Ecology issued a No Further Action (NFA) determination for the Site in 1998. The 1998 NFA was conditioned on restrictive covenants (RCs) recorded for the Site. An RC dated September 21, 1995 was recorded under King County recording number 9510121424 and a second RC dated July 24, 1998 was recorded under King County recording number 9808101434.

A summary of Ecology VCP correspondence related to the 1995 and 1998 RCs and Sound Transit's RI, interim cleanup and FWLE construction activities is presented below.

- April 2020: Ecology approved supplemental investigation in the Y Pay Mor Site area, demolition of above-ground structures and disconnection of utilities throughout Parcel FL358. Ecology also concurred that the 1995 and 1998 RCs cover only the former Y Pay Mor dry cleaner (Space A-6) and associated contamination. However, since the contamination from Y Pay Mor dry cleaner had not been fully delineated as of 2020, Ecology determined that the RCs would apply to the northeast portion of the Parcel FL358 until the RI was completed and the Site delineated. Ecology approved Sound Transit light rail construction activities in the central and western portions of Parcel FL358.
- June 2020: Ecology issued a VCP opinion letter and approval under the RCs to complete an interim action. The interim action consisted of remedial excavation of contaminated soil within the vadose zone followed by placement of up to 15 feet of fill. In this correspondence, Ecology reiterated that the RCs apply to the former Y Pay Mor dry cleaner (Space A-6) and associated contamination and thus the extent of contamination needs to be defined during the RI.
- July 2021: Per requirements of the RCs, Ecology provided a written approval of Sound Transit's construction activities within the northeast portion of the FL358 Parcel including the removal of a deep sanitary sewer utility located east and south of the former building and construction of the new transit station.
- November 2021 and January 2022: Ecology provided comments on Sound Transit's RI Work Plan and approved Sound Transit's activities as presented in the Work Plan.

Additional details on investigations and remedial actions completed to date are described in Section 4. Additional details on Sound Transit's construction activities completed to date are presented in Section 3.1.2.

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<sup>1</sup> Ecology opinion letters are provided at <https://apps.ecology.wa.gov/cleanupsearch/site/3180>

## 3.0 BACKGROUND

### 3.1. General Site Information

The Site is situated in the northeastern portion of King County Parcel 2423200050 (Sound Transit Parcel FL358), approximately 0.3 miles west-northwest of the intersection of Interstate 5 and South 320<sup>th</sup> Street in Federal Way (Figures 1 and 2). The surrounding area has been developed primarily for commercial uses. Parcel FL358 comprises approximately 7.5 acres and was formerly developed with the SeaTac Plaza shopping center (formerly known as Best Shopping Plaza). The shopping center retail building was located in the northern half of Parcel FL358, and Y Pay Mor Cleaners occupied the easternmost tenant space of the building (Figures 2 and 3).

The ground surface elevation at the site during the shopping center operation and up to August 2020 ranged from approximately 423 feet (North American Vertical Datum of 1988<sup>2</sup> [NAVD88]) in the former building's loading dock area to 426 feet in the area of the former dry cleaner space. Following the demolition of the shopping center and completion of an interim action at the Site in the summer of 2020 (discussed below), up to 12 feet of embankment fill was placed across Parcel FL358 as part of FWLE redevelopment. The current ground surface elevation in the Site area as of the publication of this RI is approximately Elevation 435 feet.

#### 3.1.1. Site History

The SeaTac Plaza shopping center was built in 1979. Y Pay Mor Cleaners occupied the easternmost tenant space (identified as Space A-6) of the shopping center building from approximately November 1985 to June 1992 (RZA AGRA 1992). Other commercial businesses occupied Space A-6 from 1979 to 1985 and after 1992. The former dry cleaner space was occupied by a restaurant and a portion of a laser tag facility when Sound Transit began investigating the Site in 2017.

Two PCE spills occurred inside the Y Pay Mor Cleaners tenant space in 1991. The local fire department responded to the spills and subsequently reported both spills to Ecology. The first spill occurred in August 1991 and had a reported quantity of approximately 6 gallons. The second spill occurred in October 1991. The quantity of this second spill was not reported, but the spilled liquid reportedly covered an area of approximately 10 feet by 15 feet in plan dimensions. Both PCE spills reportedly occurred on the concrete floor in the vicinity of the dry cleaning equipment along the then western wall of the tenant space. Spilled PCE liquid was reportedly cleaned up by Chemical Processors, Inc. (RZA AGRA 1992). Subsequent investigations conducted at the Site more recently identified an additional PCE release source area that was near an exterior stormwater catch basin in the loading dock area directly north of the former dry cleaner space (Figure 3). This northern source area is discussed further in Section 4.9.

#### 3.1.2. Recent Construction, Current, and Future Land Use

Parcel FL358 is currently an active construction site for Sound Transit's FWLE project. Demolition of the building and former Y Pay Mor Cleaner tenant space began in May 2020. FWLE is expected to be operational in 2025 or 2026. Following demolition and "hot spot" remedial excavation (Section 4.9) in August 2020, Sound Transit placed up to 12 feet of aggregate fill across the Y Pay Mor Cleaners Site and surrounding areas between August and October 2020, raising the former ground surface elevation from

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<sup>2</sup> NAVD88 is the reference elevation used throughout this report unless noted otherwise.

approximately 423 to 426 feet to nearly the same elevation as the existing Federal Way Transit Center and Parking Garage that is situated north-adjacent to the FL358 Parcel (see Figure 2). An additional 2 to 3 feet of fill are planned to reach final grade prior to the end of construction. Sound Transit planned ROW and property are shown on Figures 2 and 4.

Other construction activities between 2020 and 2023 in the Y Pay Mor Site vicinity include general construction staging and operations (e.g., materials and equipment storage, wheel wash, temporary road), removal or abandonment of existing utilities, construction of the elevated rail and future transit station and installation of stormwater detention vaults as shown in Figure 2, and installation of new utilities above the groundwater table.

In 2022 and 2023, Sound Transit constructed three new stormwater detention vaults (Figure 2) situated approximately 350 feet downgradient of the Y Pay Mor Site. The purpose of the vaults is to detain stormwater generated within the new Federal Way Downtown Station and surrounding ROW. Groundwater was dewatered during vault construction activities and dewatered water was analyzed for volatile organic compounds (VOCs) and other chemicals listed in the National Pollution Discharge Elimination System (NPDES) Administrative Order (AO) for the construction site. PCE and associated breakdown products were not detected in the samples. Other select VOCs were detected and likely associated with the ARCO petroleum plume located near the vaults<sup>3</sup>. The analytical data for NPDES-related water samples are included in Appendix A.

Remaining FWLE construction yet to be completed as of the publication of this RI report includes the transit station interior finishes, final grading to elevations ranging between 433 and 437 feet, and paving (parking lot, new rights-of-way [ROW], bus loop, sidewalks). Most of these activities are expected to be complete before the end of 2023.

Once Sound Transit's construction is complete, the majority of the Y Pay Mor Site will comprise a paved bus loop and sidewalk (Figures 2 and 4). The northwestern corner of the Y Pay Mor Site is designated as surplus property with possible future transit oriented development (TOD) uses in the next 4 to 5 years. Future redevelopment plans are not known at this time, but TOD may be a mix of residential and commercial uses. The Site is zoned by Federal Way as "City Center Core" which allows mixed commercial and multifamily residential (City of Federal Way 2022a).

### **3.1.3. Adjacent Property Use**

Other than the existing transit center, current surrounding land use near the Y Pay Mor Site is generally multifamily residential, commercial (retail stores and restaurants) and offices. Construction activities for the FWLE project are also ongoing in surrounding areas. Current property uses and planned changes are shown on Figure 2. The FWLE project includes the following changes:

- Development of Federal Way Downtown Station within, south and east of the Y Pay Mor Site.
- Development of new ROW and potential TOD use within, south and west of the Y Pay Mor Site.

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<sup>3</sup> The ARCO petroleum plume is described in the 2020 Annual Site Status Report dated March 1, 2021 by Arcadis. The ARCO plume includes petroleum hydrocarbons and associated VOCs that are not detected at the Y Pay Mor Site. The Y Pay Mor Site is upgradient of the ARCO Site.

- Demolition of the current Federal Way Transit Center to the north of the Y Pay Mor Site and development of new ROW.
- Redevelopment of the current parking lot directly east of 23<sup>rd</sup> Avenue South into a bus layover area.

#### **3.1.4. Underground Utilities**

The underground utilities associated with the original shopping center complex where the Y Pay Mor business operated are shown on Figure 3 and consisted of stormwater, sanitary, gas, telecommunication, electrical and water. Between 2020 and 2023, these utilities were closed in place within Sound Transit ROW and property, and were removed by excavation if they were located within future City of Federal Way ROW. The utilities were closed in place by filling with controlled density fill (CDF). However, portions of the stormwater collection system that could potentially have been a preferential pathway for contaminant migration within the Sound Transit ROW and property were removed by excavation.

New water, storm drain, electrical, and communications utilities were installed in the area of the former Y Pay Mor Site and extend southward parallel to the planned bus loop as shown on Figure 4. Electrical and communications are housed within a utility duct bank beneath the planned sidewalk area. The new subsurface utilities are situated above the groundwater table. No existing utilities are present below the groundwater table, eliminating the risk of potential preferential pathways for contaminant migration.

### **3.2. Environmental Setting**

Key elements of the environmental setting of the Site, including climate, physiography, surface water, stormwater conveyance, geological and hydrogeological setting are summarized in the following sections.

#### **3.2.1. Climate**

The climate of the Puget Sound area is controlled by the Pacific Ocean; the southern region of the Puget Sound lowland is affected predominantly by weather formed over the ocean and transported over the Coast Range by prevailing onshore wind patterns. Temperatures and precipitation in the south King County region are moderate although periodic extremes can occur. Strong frontal systems and oceanic storms can cause high winds and flooding in late fall and winter in the Puget Sound lowland region around the interstate corridor. Snowfall can occur in winter in the Tacoma-Federal Way area but tends to be of limited duration and accumulation. Average temperatures range from 45 °F (January) to 78 °F (August) and average annual rainfall is 39 inches with approximately 70 percent of the yearly precipitation falling between October and March. Actual temperatures and precipitation are highly localized due to microclimates created by changes in relief and local surface water features.

#### **3.2.2. Physiography**

The Site is situated in the southern portion of the Puget Sound Lowland, which is bounded by the Green River valley to the east, the Puyallup River valley to the south, and Puget Sound and the Olympic Mountains to the west. During the Pleistocene Epoch (between 2 million and 10,000 years ago), the Puget Lobe continental ice sheet advanced from the north into the region several times, carving a north-south trending glacial trough and forming the Puget Sound Lowland. Glacial and fluvial activity, and erosion associated with the advancement and retreat of the Puget Lobe during the Pleistocene Epoch, formed a thick sequence of unconsolidated sediments of both glacial and non-glacial origin that underlay the Site. Tertiary-aged bedrock underlies the glacial sediments at approximately 1,500 feet depth (Booth et al. 2004).

Ground surface elevations at the Site is approximately 435 feet. The ground surface within the Site is relatively flat as these areas are actively used for ongoing construction activities; the Site area will be regraded to final subgrade elevations before the bus loop is paved and the curbing and pedestrian access improvements are constructed.

### **3.2.3. Surface Water/Stormwater**

The Site is situated in the Hylebos Creek drainage basin within the Puyallup River watershed. Stormwater on the FL358 Parcel is currently directed to three stormwater detention vaults installed as part of the FWLE construction. The vaults are located near South 320<sup>th</sup> Street. The water is currently treated prior to discharge under the project NPDES construction stormwater permit and associated AO. The stormwater is discharged to the City of Federal Way stormwater system and subsequently Hylebos Creek and Commencement Bay (City of Federal Way 2022b) following treatment. The construction water treatment system will be disconnected following construction.

There are three small lakes located approximately 0.6 to 0.9 mile northwest, north, and northeast of the Site (Easter Lake, Steel Lake, and Lake Dolloff, respectively). These lakes are inferred to be hydraulically upgradient or cross-gradient of the Site based on the inferred southwesterly groundwater flow direction at the Site. Based on Google Earth satellite imagery (accessed December 22, 2020), the nearest surface water body inferred to be downgradient of the Site is a small, unnamed pond approximately 1.6 miles southwest of the Site.

### **3.2.4. Geology**

The Site is located within the Puget Sound Lowland, which is bounded by the Cascade Mountains to the east and the Olympic Mountains to the west. The Puget Sound Lowland is a north-south trending trough consisting of a thick sequence of Quaternary deposits (approximately 1.8 million years old to present). The Puget Lowlands experienced at least six periods of continental glaciation during the Pleistocene (Blunt et al. 1987; Easterbrook 1994). The most recent glacial episode affecting the Site vicinity is referred to as the Vashon Stade of the Fraser Glaciation (Armstrong et al. 1965), which occurred approximately 10,000 to 25,000 years ago. Most of the near-surface geologic units consist of weathered and relatively unweathered interglacial and glacial deposits associated with the advance and retreat of the last glacial occurrence, and the Holocene-age (approximately 10,000 years ago to present) deposits that overlie the glacial deposits.

General geologic conditions in the Site vicinity were evaluated by reviewing the United States Geological Survey (USGS) geologic map for the Site area (Poverty Bay 7.5 minute quadrangle, Booth 2004). Native geologic soils at the Site area include Vashon till. The till was deposited by and directly beneath the advancing Vashon-age glacier as it moved south through the Site area. The deposit typically consists of a dense mixture of silt, silty sand, and sand with silt and gravel. Non-glacial Holocene deposits, which include wetland deposits of peat and alluvium, are mapped in the area surrounding the Site.

The 1949 topographic map shows a north-south trending drainage channel that appeared to extend onto the eastern portion of FL358 (USGS 1949). The bottom of the historic drainage channel is interpreted to represent a historic local topographic depression subsequently filled, as recent Site grades are relatively flat. Geotechnical borings completed nearby in the vicinity of the drainage channel document the presence of fill with woody debris. The extent of fill that would be anticipated to be associated with a deep drainage channel was not observed in the area of Y Pay Mor Site and thus it is inferred that the Site area is not directly overlying the historically filled drainage channel. A local historic topographic low was situated

approximately 500 feet southwest of the Site based on apparent standing water shown in that area in a 1968/1974 aerial photograph and the lowland area shown in the 1975 topographic map (USGS 1975). The local historic topographic low was apparently filled during the subsequent development of the SeaTac Plaza shopping center.

Soil stratigraphy based on the results of the RI are further discussed in Section 5.1.

### **3.2.5. Hydrogeologic**

Groundwater at the Site appears to be present in two water-bearing zones. The shallow water-bearing zone is within fill that overlies a dense silt aquitard, the top of which was encountered at approximately 34 feet below current ground surface (bgs). The shallow unconfined groundwater is present between 9 and 16 feet bgs (Elevations 426 and 417 feet) and herein referred to as “shallow aquifer”. The flow direction for the shallow aquifer appears to be multidirectional, toward the south-southwest and west, based on 2022 and 2023 groundwater elevation data from groundwater monitoring. The lower water-bearing unit is confined in the glacial deposits beneath the hard silt aquitard.

Water supply sources were evaluated based on the King County Groundwater Resources and Ecology Water Rights Search (King County 2023; Ecology 2023). There are no major groundwater supply wells within the Site. One Group A well (public water) for Lakehaven Utility District is located 7,700 feet downgradient of the Site with the 10-year capture zone situated approximately 1,000 feet downgradient of the Site. The depth of this well is reported to be approximately 140 feet deep.

Two Group D (domestic water) wells are located 1,600 and 2,100 feet ( $\pm 660$  feet) downgradient of the Site according to the King County Groundwater Resources map; however, the locations of these wells are not shown in Ecology’s Water Rights Search database. One of the domestic wells is reportedly screened at 28 feet bgs and the other well is reportedly screened at 463 feet bgs. It is unclear if the Group D wells shown on the King County Groundwater Resources map have active water rights.

## **4.0 INVESTIGATIONS AND REMEDIAL ACTION**

This section summarizes investigations and remedial actions completed at the Site between 1992 up to Fall 2023 and associated regulatory determinations. A total of approximately 312 soil samples, 82 groundwater samples, and 18 shallow passive soil vapor samples collected from the Site have been submitted for chemical analysis as of the publication of this RI to characterize subsurface conditions at the Site. A list of the borings, test pits and monitoring well locations completed at the Site to date is provided in Table 1 and locations are presented in Figures 5 through 9. Soil and groundwater sample analytical results for PCE, PCE breakdown products and select VOCs are summarized in Tables 2 through 6. Additional chemical analytical data for other chemicals are included Appendix B. A compilation of all investigation borings logs is provided in Appendix C.

### **4.1. Preliminary Remedial Investigation (1992)**

A preliminary RI was conducted between June and November 1992 (RZA AGRA 1992). The purpose of the preliminary RI was to investigate potential contamination in soil and groundwater related to the former dry cleaning operations, including the Y Pay Mor PCE spills reported in 1991. Soil and groundwater chemical

analytical results for the 1992 preliminary RI are summarized in Tables 2 and 3. The subsurface investigation consisted of the following as shown on Figure 5:

- **Twelve soil borings.** Ten of the borings were completed inside the former dry cleaner space to depths of 7.5 to 20 feet below the former ground surface (bfgs) in the area of the former dry cleaning equipment, a floor drain and connected floor drain pipe, and the 1991 PCE spills. This area was generally along the then-west wall of the former dry cleaner space. Two borings were completed outside the former dry cleaner space to depths of 15 to 20 feet bfgs: one in the parking lot east-adjacent to the space and one in the parking lot south-adjacent to the space. Select borings were completed as monitoring wells or soil vapor extraction (SVE) well points as follows:
- **Three groundwater monitoring wells.** One well (originally identified as BW2/MW-1) was installed inside the former dry cleaner space and was screened from 15 to 20 feet bfgs. The other two wells (MW-2 and MW-3, hereinafter identified as Y Pay Mor-MW2 and Y Pay Mor-MW3) were installed outside the former dry cleaner space and screened from 9 to 19 feet bfgs and 7 to 14 feet bfgs, respectively. Well MW-1 was never sampled and was decommissioned several months after it was installed because the well screen had separated from the well casing. A SVE well point (see below) was subsequently installed in the MW-1 borehole (see below).
- **Six SVE well points.** SVE well points were installed inside the former dry cleaner space (B1-VP-6 which was completed in the former BW2/MW-1 groundwater well borehole and five other well points identified as B6/VP-1 through B10/VP-5). The SVE well points were screened from the ground surface to approximately 7.5 feet bfgs and were later connected to an SVE system installed in 1993 (described in Section 4.2).
- **Four soil vapor survey points.** Soil vapor survey points (SVS-1 through SVS-4) were completed inside the former dry cleaner space to depths of 5 to 10 feet bfgs in the area of the former dry cleaning equipment, floor drain, and floor drain pipe. The soil vapor survey points were used to measure total organic vapor concentrations in soil vapor with a photoionization detector (PID) (i.e., qualitative screening). The PID readings ranged from 5.5 to 1,094 parts per million (ppm). The highest PID readings were obtained adjacent to the drainpipe within 10 feet of the floor drain.
- **Thirty-five soil samples analyzed for volatile organic compounds (VOCs).** The highest detected concentration of PCE in the 1992 soil samples was 7,200 milligrams per kilogram (mg/kg) in a sample obtained from a depth of 2.5 feet bfgs in a boring (B-12) that was situated near the floor drain in the former dry cleaning equipment area (Figure 5)<sup>4</sup>.
- **Four groundwater samples analyzed for VOCs.** Groundwater samples were collected from monitoring wells Y Pay Mor-MW2 and Y Pay Mor-MW3 and from boring B-12 near the floor drain (two samples were collected from well Y Pay Mor-MW3) in 1992. The depth to groundwater measured in the monitoring wells ranged from approximately 8.1 to 10.9 feet bfgs. The highest detected concentration of PCE in the groundwater samples was 1,700 micrograms per liter (µg/L) in the reconnaissance groundwater sample (screening data) obtained from a depth of 12.5 feet bfgs in boring B-12.

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<sup>4</sup> PCE concentration is for field duplicate sample B12\_S-1DL collected from boring B12 at 2.5 feet bfgs as reported in the chemical analytical reports. The field duplicate sample and result are not listed in Table 2B of the report by RZA AGRA, Inc., *Preliminary Remedial Investigation, Former Y-PAY-MOR Dry Cleaners, Best Shopping Plaza, 2210 320<sup>th</sup> Street South, Federal Way, Washington*, dated November 1992.

In addition to the field activities summarized above, a reconnaissance inspection of areas outside the former dry cleaner space identified visible staining of the asphalt surrounding a stormwater catch basin in the loading dock area north of the store.

#### **4.2. Interim Cleanup Action – Soil Vapor Extraction (1993-1994)**

An interim cleanup action was conducted between June 1993 and September 1994 to remove PCE and the PCE breakdown products trichloroethene (TCE) and cis-1,2-dichloroethene (cis-DCE) from soil beneath the former dry cleaner space (AGRA Earth & Environmental 1994). An SVE system consisting of SVE wells, a vacuum blower, a moisture knockout tank, and two 1,000-pound granular activated carbon (GAC) units was installed to treat soil in the vadose zone beneath the building slab. The SVE wells included the six well points installed during the preliminary RI and one new SVE well point (VP-7). The extent of the SVE system and SVE well points are shown on Figure 5.

The SVE system operated for 15 months from June 1993 to September 1994. The system was shut off in September 1994 after it was determined that PCE recovery concentrations in the extracted soil vapor stream had decreased by more than 70 percent (from 130 ppm to 36 ppm) and extracted vapor levels had reached asymptotic conditions.

In November 1994, seven confirmation soil borings (CB-1 through CB-7) were completed in the SVE treatment area and soil samples were collected from depths of 5 to 8 feet bfgs. The soil samples were reportedly analyzed for halogenated VOCs (which includes chlorinated volatile organic compounds [CVOCs]). However, the chemical analytical laboratory packages were not included in the 1994 Interim Action Report obtained from Ecology and the summary data table only included select CVOc compounds. The following soil sample analytical results were reported as summarized in Table 2:

- PCE was detected in one confirmation soil sample at a concentration of 1.3 mg/kg collected from boring CB-4 from 5 to 6.5 bfgs. PCE was not detected in the remaining analyzed soil samples.
- Cis-DCE was detected in three soil samples at concentrations ranging from 0.11 to 0.80 mg/kg collected from borings CB-3, CB-4, and CB-7 at a depth of 5 to 6.5 feet bfgs.
- Cis-DCE and trans-DCE were detected in boring CB-5 from 6.5 to 8 feet bfgs at concentrations of 71 mg/kg and 0.59 mg/kg, respectively. DCE was not detected in boring CB-1, CB-2, and CB-6.
- Data were not reported for the remaining CVOcs, but the report text stated other halogenated VOCs (which includes CVOcs) were not detected. Available soil chemical analytical results are summarized in Table 2.

#### **4.3. Biannual Groundwater Sampling (1994 and 1997)**

Biannual groundwater sampling was conducted in 1994 and 1997 (AGRA Earth & Environmental 1994 and 1997). The purpose of the biannual groundwater sampling was to evaluate seasonal (i.e., dry and wet season) variability of dissolved VOC concentrations in groundwater. Well Y Pay Mor-MW2, located east-northeast and hydraulically upgradient of the former dry cleaner space, was sampled in June and November 1994. Well Y Pay Mor-MW3, located southwest and hydraulically downgradient of the former dry cleaner space, was sampled in June and November 1994 and in February and July 1997. The depths to groundwater measured in the monitoring wells ranged from approximately 8.1 to 10.7 feet bfgs.

The groundwater samples were analyzed for VOCs. VOCs were not detected in the samples from wells Y Pay Mor-MW2. Cis-DCE was detected at low concentrations (1.82 to 5.4 µg/L) in the samples from well Y Pay Mor-MW3. Groundwater chemical analytical results are summarized in Table 3.

#### 4.4. Ecology No Further Action Determinations (1995 and 1998)

Ecology issued an interim conditional NFA letter for the Site in June 1995 (Ecology 1995) based on a review of the independent remedial action (preliminary RI and interim cleanup action) conducted between 1992 and 1994. The interim NFA letter was conditioned on an RC and on additional groundwater sampling at well Y Pay Mor-MW3. An RC dated September 21, 1995, was recorded under King County recording number 9510121424. The 1995 RC applied to the property within the footprint of the former dry cleaner space (space A-6). The RC documented that residual concentrations of PCE and sis-DCE remained in soil (borings CB-4 and CB-5) and PCE remained in groundwater (boring B-12) beneath the former dry cleaner space at levels exceeding MTCA Method A cleanup levels (Figure 4). The RC also prohibited the use of groundwater underlying the property for domestic purposes and any activity on the property that may interfere with ongoing groundwater monitoring.

Ecology issued a conditional NFA determination for the Site in October 1998 (Ecology 1998) based on a review of the independent remedial action, the biannual groundwater sampling results from well Y Pay Mor-MW3, and other Site-related information in Ecology's files. Ecology's 1998 NFA determination was conditioned on a second RC dated July 24, 1998, and recorded under King County recording number 9808101434. The second RC references residual soil contamination exceeding MTCA cleanup levels beneath the former dry cleaner space and prohibits any activity on the property that may result in the release or exposure to the environment of a hazardous substance that remains on the property as part of the independent remedial action, or that may create a new exposure pathway, without prior written approval from Ecology. The 1998 RC also prohibits any activity on the property that may interfere with the integrity of the independent remedial action and continued protection of human health and the environment.

#### 4.5. Phase II Environmental Site Assessment (2017)

A Phase II Environmental Site Assessment (ESA) was conducted in October 2017 (GeoEngineers 2017a). The purpose of the Phase II ESA was to assess current soil and groundwater conditions at the Site in anticipation of Sound Transit's planned acquisitions and FWLE construction activities on Parcel FL358. Relevant soil and groundwater chemical analytical results are summarized in Tables 2 and 3. Excerpts of the Phase II ESA data are included in Appendix B. The 2017 investigation consisted of the following:

- **Six soil borings.** The borings were completed outside the former dry cleaner space to depths of 20 to 26 feet bfgs. One boring (FL358-B1) was completed in the loading dock area north of the former dry cleaner space, two borings (FL358-MW1 and FL358-MW2) were completed in the parking lot east-adjacent to the space, and three borings (FL358-B3, FL358-MW3, and FL358-MW4) were completed in the parking lot south-adjacent to the space (Figure 6).
- **Four groundwater monitoring wells.** Two wells (FL358-MW1 and FL358-MW2) were installed east of the former dry cleaner space and were screened from approximately 6 to 25 feet bfgs. The other wells (FL358-MW3 and FL358-MW4) were installed south and southwest of the former dry cleaner space, respectively, and were screened from approximately 8 to 19.5 feet bfgs.
- **Soil Chemical Analysis.** Nineteen soil samples analyzed for VOCs, gasoline-range petroleum hydrocarbons, diesel- and lube oil-range petroleum hydrocarbons, arsenic, and/or lead. VOCs were

analyzed in 19 samples. Arsenic and lead were analyzed in ten shallow soil samples (0- to 1-foot bfgs) to assess potential impacts associated with the Tacoma Smelter Plume. Gasoline-, diesel-, and lube oil-range petroleum hydrocarbons were analyzed in two samples based on field screening evidence of potential petroleum contamination (i.e., slight sheen) observed during sampling.

- The highest detected concentration of PCE in soil was 0.066 mg/kg in a sample obtained from a depth of 13 feet bfgs in boring FL358-B1 completed in the loading dock area. In addition to PCE, low concentrations of TCE and cis-DCE were detected in several samples. Low concentrations of lube oil-range petroleum hydrocarbons (100 and 79 mg/kg, respectively) were detected in two samples obtained from depths of 1.5 and 5 feet bfgs in boring FL358-MW1 completed east of the former dry cleaner space. Arsenic was detected at concentrations of 6.2 and 46 mg/kg in two shallow soil samples, and lead was detected at a concentration of 11 mg/kg in one shallow soil sample.
- **Five groundwater samples analyzed for VOCs.** The groundwater samples were collected from the monitoring wells installed during the Phase II ESA (FL358-MW1 through FL358-MW4) and previously installed well Y Pay Mor-MW3 (Figure 6). Well Y Pay Mor-MW2 was not located and was assumed to have either been removed or previously paved over. The depth to groundwater measured in the monitoring wells ranged from approximately 7.1 to 9.4 feet bfgs.
  - PCE, TCE, and cis-DCE were detected in the groundwater sample from well FL358-MW1 at concentrations of 0.21, 1.0, and 0.61 µg/L, respectively. Cis-DCE was detected in the groundwater samples from wells FL358-MW4 and Y Pay Mor-MW3 at concentrations of 0.34 and 0.20 µg/L, respectively.

#### 4.6. Ecology Periodic Review (2018)

MTCA requires a periodic review of cleanup sites with an NFA status and institutional controls (i.e., environmental or restrictive covenants) every five years. Ecology completed a periodic review for the Site in September 2018 (Ecology 2018). Based on a review of existing Site information, Ecology determined that no additional action was necessary, and that the RC was still protective because the building and pavement acted as a cap to prevent infiltration of stormwater and direct contact with hazardous substances.

#### 4.7. Phase II Environmental Site Assessment Addendum (2018)

An additional subsurface investigation was conducted in November and December 2018 as an addendum to the 2017 Phase II ESA (GeoEngineers 2019). The purpose of the Phase II ESA Addendum was to identify locations beneath the building slab and the loading dock area north of the former dry cleaner space where potential contaminants may be encountered during Sound Transit's FWLE construction activities. The subsurface investigation consisted of 18 passive soil vapor samples analyzed for PCE, TCE, and cis-DCE. Fifteen passive soil vapor samplers were installed beneath the building slab inside the former dry cleaner space and what was originally the tenant space west-adjacent to the dry cleaner (at the time of the study, these locations were occupied by a restaurant and a laser tag facility, respectively), and three passive vapor samplers were installed in the loading dock area (see Figure 7). The samplers were installed to depths of 2.1 to 2.7 feet bfgs and remained in place undisturbed for nine days before they were removed for laboratory analysis. The soil vapor samples provided qualitative, screening-level data for identifying locations where elevated VOC concentrations may be present.

Chemical distribution maps generated from the laboratory analysis of the soil vapor samples confirmed the presence of residual PCE, TCE, and cis-DCE beneath the building slab in the vicinity of the 1991 PCE spills.

The passive vapor sampling results did not identify PCE or associated breakdown products adjacent to the stormwater catch basin in the former loading dock area.

#### 4.8. Supplemental Investigation (2020)

A supplemental Site investigation was conducted between April and June 2020 (O'Neill Service Group [OSG] 2020 and 2021). The primary purpose of the 2020 supplemental investigation was to delineate the lateral and vertical extent of VOC-contaminated soil and groundwater exceeding MTCA Method A cleanup levels in preparation for an interim cleanup action (contaminated soil removal) that was subsequently conducted in July and August 2020. The investigation was completed following building demolition. The former dry cleaning equipment/floor drain area had been identified as a PCE source area during previous investigations. The former loading dock catch basin area was identified as a second PCE source area based on the supplemental investigation soil sampling results. Soil and groundwater chemical analytical results for the 2020 samples are summarized in Tables 2 and 3. The 2020 subsurface investigation consisted of the following:

- **Fifteen soil borings.** The borings (358-B1 through 358-B15) were completed within and around the footprint of the former dry cleaner space to depths of 25 to 50 feet bfgs (Figure 6). One boring within the footprint of the former dry cleaner space (358-B10) was completed to 50 feet bfgs; the other borings were completed to 25 to 35 feet bfgs. The footprint of the former dry cleaner space had been made accessible by recent building demolition.
- **Eight test pits.** Seven of the test pits (358-PH1 through 358-PH6 and 358-PH8) were completed in areas of the former dry cleaning equipment, floor drain, and drain pipe, and one of the test pits (358-PH7) was completed adjacent to the stormwater catch basin in the former loading dock area north of the former dry cleaner space (Figure 6). The test pits were completed to a maximum depth of 15 feet bfgs.
- **Ninety-nine soil samples were analyzed for VOCs.** The highest detected concentration of PCE was 400 mg/kg in a sample obtained from a depth of 9 to 10 feet bfgs in test pit 358-PH7 completed adjacent to the stormwater catch basin in the former loading dock area. The next highest PCE concentration was 15.3 mg/kg in a sample obtained from a depth of 4 to 5 feet bfgs in test pit 358-PH8 near the floor drain in the former dry cleaning equipment area. The PCE breakdown products TCE, cis-DCE, trans-1,2-dichloroethene (trans-DCE), and vinyl chloride also were detected in some soil samples.
- **Fourteen groundwater samples were analyzed for VOCs.** The groundwater samples were collected from monitoring wells FL358-MW1 through FL358-MW4 and Y Pay Mor-MW3, and from temporary well points installed in nine borings (358-B3 through 358-B7, 358-B11, and 358-B13 through 358-B15) (Figure 6). The temporary well points were screened from approximately 15 to 25 feet bfgs. The depth to groundwater measured in the monitoring wells ranged from approximately 6 to 11.6 feet bfgs.
  - VOCs were not detected in the groundwater samples collected from the five monitoring wells. PCE, TCE, cis-DCE, and/or vinyl chloride were detected in reconnaissance groundwater samples (screening data) collected from six temporary well points. The highest concentrations of these constituents detected in the reconnaissance groundwater samples were 136 µg/L (PCE), 69.9 µg/L (TCE), 68.3 µg/L (cis-DCE), and 18.8 µg/L (vinyl chloride).

#### **4.9. Interim Cleanup Action – Contaminated Soil Removal (2020)**

An interim cleanup action was conducted in July and August 2020 to remove chlorinated-VOC (CVOC) contaminated soil within the vadose zone (approximately 10 feet bfgs) (OSG 2021). A total of 4,202 tons of PCE/TCE-contaminated soil (classified either as hazardous waste and non-hazardous under a contained-in-determination [CID]) was excavated from the former dry cleaning equipment/floor drain area (hereinafter identified as the “Southern Source Area”) and the former loading dock catch basin area (hereinafter identified as the “Northern Source Area”). Remnant floor drains and storm drain pipes were also removed. The remedial excavations extended to a maximum depth of 10 to 11 feet bfgs. The excavated soil was disposed of at permitted facilities in Roosevelt, Washington and Arlington, Oregon. In addition, approximately 39,634 gallons of excavation water and ponded water were removed from the Site and disposed of at a permitted facility in Arlington, Oregon.

A total of 115 soil samples were collected from the remedial excavations and analyzed for PCE and PCE breakdown products to guide the soil removal and document VOC concentrations at the final limits of the excavations. After soil removal was completed and confirmation soil samples were collected, the remedial excavations were backfilled with clean fill. Soil analytical results of soil that was left in place are summarized in Table 4 and shown on Figure 8, in relation to previous investigation locations.

The analytical results for soil samples collected at the final limits of the southern remedial excavation indicate successful removal of PCE- and TCE-contaminated soil that exceeded MTCA Method A cleanup levels in the southern source area (OSG 2021).

The analytical results for soil samples collected at the final limits of the northern remedial excavation indicate that except for one sample location, all contaminated soil within the upper 10 feet from the former ground surface that exceeded MTCA Method A cleanup levels in the northern source area was removed (OSG 2021). The one exception was PCE detected at a concentration slightly exceeding the MTCA Method A cleanup level in a soil sample (358-PEX-98-10) obtained from the north excavation sidewall at a depth of 9 to 10 feet bfgs. Soil represented by sample 358-PEX-98-10 could not be removed due to the proximity of the stormwater utility. A soil sample subsequently obtained from 9 to 10 feet bfgs in a test pit approximately 5 feet north of sample 358-PEX-98-10 (test pit 358-PH-105) (Figure 8) did not contain detectable VOCs, indicating that only a small quantity of soil exceeding MTCA Method A cleanup levels remains where the sidewall of the northern limit of the remedial excavation was. PCE and/or TCE concentrations exceeding MTCA Method A cleanup levels were detected in most of the soil samples collected from the base of the remedial excavation (corresponding to excavation base elevations between approximately 412 and 416 feet). The analytical data from the interim action and the 2020 supplemental investigation indicate that soil contamination exceeding MTCA Method A cleanup levels remains below the groundwater table in the vicinity of the northern source area.

#### **4.10. Remedial Investigation (2022 to 2023)**

Supplemental RI field activities were conducted between June 2022 and March 2023 (Shannon & Wilson, Inc. [SWI] 2022 and 2023 and this report, Appendix D). The objective of these RI field activities was to collect sufficient data and information to define the extent of contamination and characterize the Site, in order to develop the RI and FS reports. The 2022 investigation by SWI consisted of installing 11 new monitoring wells and conducting three rounds of quarterly groundwater sampling. GeoEngineers conducted a fourth round of groundwater monitoring in March 2023. Additionally, GeoEngineers completed slug testing on four wells. The locations of the 2022 explorations are presented in Figure 9. Soil and groundwater

chemical analytical results are summarized in Tables 5 through 7. Groundwater levels are summarized in Table 8. Below is a detailed summary of the investigation:

- **Eleven soil borings.** The borings (FL358-MW5A, FL358-MW5B, and FL358-MW6 through FL358-MW14) were completed as monitoring wells within and around the footprint of the former dry cleaner space to depths of 27 to 42.5 feet bgs using a sonic drilling rig (Figure 9). One boring at the former storm drain north of the former dry cleaner space (FL358-MW5A) was completed to 27 feet bfgs; the other borings were completed to 35 to 42.5 feet bgs. The well monuments were temporarily protected with manhole covers to limit damage during active construction at the Site.
- **Twenty-nine soil samples were analyzed for chemical and physical analysis.** The soil samples were collected from the exploration borings and analyzed for PCE, TCE, cis-DCE, trans-DCE, DCE, and vinyl chloride. The highest detected concentration of PCE was 150 mg/kg in a sample obtained from a depth of 25 to 26 feet bgs in sample FL358-MW5A-25-26 completed adjacent to the stormwater catch basin in the former loading dock area. The next highest PCE concentration was 11 mg/kg in a sample obtained from a depth of 28 to 29 feet bgs in sample FL358-MW5B-28-29 at the same location. The PCE breakdown products TCE, cis-DCE, trans-DCE, and vinyl chloride also were detected in some soil samples (Table 5).
  - Six samples from three borings (FL358-MW5A, FL358-MW5B, and FL358-MW6) were analyzed for physiochemical parameters (pH, total solids, bulk density, and total organic carbon) and grain size analysis (Table 6).
- **Forty-eight groundwater samples were analyzed for chemical and biological analysis.** The groundwater samples were collected from existing monitoring wells FL358-MW5A through FL358-MW14 (Figure 9). Four groundwater monitoring events were conducted from 11 wells in June, August, November 2022, and March 2023.
  - Groundwater samples were analyzed for PCE, TCE, cis-DCE, trans-DCE, DCE, and vinyl chloride (Table 7). PCE, TCE, cis-DCE, trans-DCE and/or vinyl chloride were detected in the groundwater samples collected from the monitoring wells. The highest concentrations of these constituents detected in the groundwater samples were 91 µg/L (PCE), 150 µg/L (TCE), 160 µg/L (cis-DCE), 1.3 µg/L (trans-DCE) and 14 µg/L (vinyl chloride).
  - Groundwater samples collected during the three seasonal sampling events (June and August 2022 and March 2023) were additionally tested for dissolved gasses (ethane, ethylene, methane, and acetylene) and conventional analyses (biologic oxygen demand [BOD], total organic carbon [TOC], ammonia, nitrate, nitrite, and iron). Dissolved gases and conventionals are summarized in Table 7 and generally show evidence of an anaerobic aquifer in the area of the CVOC plume.
  - One round of samples in March 2023 was submitted for dehalococcoides (DHC). DHC cells were detected in 11 of 12 samples with cell counts ranging from 1.6 to 2,580 cells per milliliter (cells/mL). Reductive dechlorination (breakdown) is associated with cell counts greater than 1,000 cells/mL; the level was identified in one well (FL358-MW5A).
- **Water Levels.** Site-wide water level gauging was conducted during each groundwater sampling to measure static water levels within a 1-hour window (Table 7). Typically, water levels were measured before groundwater sampling occurred. However, during the August 2022 event, water levels were not measured before sampling. In order to provide comparative pre-sampling water level data, a follow-up water level gauging event was conducted in October 2022 before the onset of autumn heavy rainfall events. The depth to groundwater measured in the monitoring wells ranged from approximately 9 to 16 feet bgs (corresponding to Elevation 417 to 426 feet).

- **Slug Tests.** Slug tests were completed at four wells (FL358-MW5A, FL358-MW5B, FL358-MW6 and FL358-MW14) to evaluate the hydraulic conductivity across the screened formations. Hydraulic conductivities were calculated in feet per day using the Bouwer and Rice method (Bouwer 1976) and are presented in Section 5.1. The field and evaluation methodology are described in Appendix E. Hydraulic conductivity results are included in Table 1.
  - The site-wide shallow aquifer groundwater elevation data and slug tests were used to develop groundwater elevation contour, hydraulic conductivity and linear groundwater flow velocities. Calculations based on field hydrogeologic measurements are discussed in Section 5.2.

## 5.0 CONCEPTUAL SITE MODEL

Key elements of the CSM including geological and hydrogeological setting, sources of contamination, receptors, and exposure pathways are summarized in the following sections. The fate and transport of contaminants is summarized in Section 7.0. The nature and extent of contaminants is summarized in Section 8.0.

### 5.1. Geology/Hydrogeology

The three general soil units at the Site consist of material interpreted as fill, glacial till, glacial lacustrine deposits and potential glacial advance outwash. Prior to the 2020 interim action and subsequent placement of up to 12 feet of fill at the Site, the uppermost soil unit generally consisted of 5 to 8 feet of sand and gravel fill that was interpreted to have been placed during the original development of the former shopping center. With the backfilling of remedial excavations and the additional fill placement in 2020, the uppermost soil unit now consists of approximately 13 to 22 feet of fill. A 2- to 3-foot-thick seam of organic soil (silt and sand with varying amounts of peat and woody material) is present below the fill in a localized portion of the Site, including beneath a portion of the former dry cleaner space. The organic material is interpreted as native deposits of the former lowland area shown in the 1979 topographic map.

The fill and organic soil are underlain by material interpreted as sandy glacial till. The till unit consists of silty sand, sandy silt, and sand and silt with gravel that extends to elevations between approximately 396 and 401 feet. A localized gravel seam was observed in borings FL358-MW5A as shown on Figure 10. The top of the hard silt layer (interpreted as glacial lacustrine) was observed between Elevations 396 and 401 feet. The hard silt layer (interpreted as glacial lacustrine) was observed to be 10-feet thick in boring 358-B10 and appears to act as an aquitard based on field soil moisture observations and analytical results that show CVOCs were not detected in soil below Elevation 400. Sand and silt with gravel (interpreted as glacial advance outwash) was encountered in boring 358-B10 at Elevation 386 feet below the hard silt layer. Figure 9 shows the location of a representative cross section line and the generalized hydrogeologic cross-section is presented in Figure 10.

The shallow aquifer appears to be perched on top of the hard silt layer (present at approximate Elevation 398 to 402 feet). The shallow aquifer at the Site occurs between Elevations 417 to 426 feet based on June through November 2022 data. The groundwater levels fluctuated approximately 3.5 feet between June and August 2022. Site groundwater levels were observed to rise approximately 2 to 7 feet between the 2020 investigation and 2022 investigations. Significant changes occurred at the Site during that period including removal of surface features such as the building and pavement, placement of up to 12 feet of fill, and the

construction and operation of a construction vehicle wheel wash, all of which potentially influenced local groundwater levels.

The horizontal hydraulic gradient is estimated to range from approximately 0.03 to 0.08 foot per foot (ft/ft), and the inferred shallow aquifer groundwater flow direction is multidirectional toward the south-southwest and west based on the 2022/2023 groundwater elevation data. The flow direction of shallow groundwater varies downgradient of the former loading dock with westerly, southerly, and southwesterly components. The estimated average linear shallow aquifer groundwater velocity is 0.45 feet/day (ft/day) with a range from 0.08 to 1.17 ft/day<sup>5</sup>.

## 5.2. Sources of Contamination

PCE releases likely occurred in two source areas associated with the Y Pay Mor dry cleaner: (1) the southern source area (i.e., the area of the former dry cleaning equipment, floor drain/drainpipe, and 1991 PCE spills) and (2) the northern source area (i.e., the stormwater catch basin in the loading dock area north of the former dry cleaner tenant space). The Y Pay Mor dry cleaner operated from November 1985 to June 1992.

## 5.3. Receptors and Exposure Pathway

Current and future land use are considered when evaluating potential receptors and exposure pathways. Humans are considered the only potential receptor for the Site. The following exposure pathways were evaluated for the Site.

- **Drinking Water.** Groundwater at the Site is not a current source of drinking water and the existing RCs prohibit potable groundwater use on the Site. The majority of Federal Way residents obtain domestic water from the public water supply system operated by the Lakehaven Water and Sewer District. One Group A Lakehaven Utility District well (public water) is located 7,700 feet downgradient of the Site with the 10-year capture zone located approximately 1,000 feet downgradient of the Site. The depth of this well is approximately 140 feet bgs and in a different aquifer than the impacted aquifer associated with the Y Pay Mor Site. Various domestic wells are also located in the vicinity Site, but these wells are located greater than 1,100 feet from the Site. Groundwater beneficial use cannot be ruled out as a potential exposure pathway given that Site groundwater could *potentially* be used as a future source of drinking water if there were no restrictions such as the Site RCs.
- **Indoor Air.** PCE, TCE and associated breakdown products in groundwater may volatilize, migrate through the vadose zone, and potentially enter future Site buildings. Therefore, indoor air vapor intrusion cannot be ruled out as a potential exposure pathway depending on the locations of future buildings at the Site.
- **Direct Contact.** Terrestrial receptors are not present based on the simplified terrestrial ecological evaluation (TEE) completed for the RI (see below). Construction workers are the primary human receptor and may potentially be exposed through direct contact with contaminated soil and groundwater during excavation activities below Elevation 426 feet (i.e., the approximate highest

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<sup>5</sup> Groundwater velocity calculation is based on groundwater gradient, hydraulic conductivity and effective porosity. The assumed effective porosity is 0.25 to 0.27 based on soil types. The site-specific hydraulic conductivity values from slug tests at monitoring wells FL358-MW5A, FL358-MW5B, FL358-MW6, and FL358-MW14 ranged from 0.13 to 4.06 ft/day. The average hydraulic conductivity value based on slug test data from wells FL358-MW5B, FL358-MW6, and FL358-MW14 is 0.77 ft/day. The hydraulic conductivity in well FL358-MW5A, where a local gravel seam was observed, was 4.06 feet/day; this is likely not representative of the Site formation. The average effective porosity values by soil type are based on Argonne National Laboratory Environmental Science Division website, U.S. Department of Energy.

groundwater elevation at the Site). FWLE construction activities will extend to Elevation 423 feet. Future TOD development depths are not known.

- **Surface Water.** The nearest downgradient surface water body is located approximately 1.6 miles from the Site. Surface water is not considered a potential receptor.

### 5.3.1. Terrestrial Ecological Evaluation

A TEE was conducted consistent with WAC 173-340-7490A. The purpose of the TEE is to evaluate whether hazardous substances detected in soil pose a threat to terrestrial receptors (e.g., plants, soil biota, and wildlife). The Site meets the criteria of Exclusion 1 and Exclusion 3, and further evaluation was not necessary<sup>6</sup>. See Appendix F for additional information.

## 6.0 CONTAMINANTS OF CONCERN AND PRELIMINARY CLEANUP LEVELS

PCULs were developed for Site to protect human health and the environment for soil and groundwater based on the CSM. Consistent with MTCA Chapter 173-340 WAC, PCULs were developed for the Site based on current and future uses at the Site, potential exposure pathways and potential receptors.

### 6.1. Chemicals of Concern (COCs)

COCs identified for the Site based on the source of contamination (historic dry cleaners), documented spills of PCE and findings of the RI are PCE and associated breakdown compounds TCE, cis-DCE, trans-DCE, DCE, and vinyl chloride.

### 6.2. Preliminary Cleanup Levels (PCULs)

PCULs were developed based on exposure pathways, standard MTCA Method A Cleanup Levels and standard Method B Screening Levels (SLs) from Ecology's "Cleanup Levels and Risk Calculations (CLARC) Master Spreadsheet.xlsx" table dated January 2023. The basis for the Site PCULs is as follows:

- **Soil PCUL.** The PCULs for soil are MTCA Method A cleanup levels for unrestricted land use (ULU). If there is no Method A cleanup level for a particular COC, the PCUL is the lowest of MTCA Method B for protection of drinking water (saturated or vadose) and direct contact.
- **Groundwater PCUL:** The PCULs for groundwater are MTCA Method A cleanup levels. If there is no Method A cleanup level for a particular COC, the PCUL is the lowest of MTCA Method B for protection of drinking water.
- **Proposed Indoor Air Cleanup Levels.** Indoor air PCULs are based on the MTCA standard Method B indoor air cleanup levels protective of human health for unrestricted land use and commercial use (WAC 173340-750[3][b]).

The matrix below summarizes the Site PCULs:

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<sup>6</sup> Exclusions 1 and 3 are based on Site contaminants and the depth of the soil and groundwater contamination (i.e., greater than 15 feet bgs), the lack of surface water and the absence of contiguous, undeveloped land larger than 1.5 acres on the Site or within 500 feet of the Site that could provide habitat for terrestrial wildlife, respectively.

COC	Soil PCUL	Groundwater PCUL	Indoor Air PCUL
PCE	Method A ULU	Method A	Method B
TCE	Method A ULU	Method A	Method B
DCEs	Method B Protective of Groundwater (saturated)	Method B	Method B
Vinyl Chloride	Method B Protective of Groundwater (saturated)	Method A	Method B

Additionally, SLs were also developed for the protection of vapor intrusion to evaluate whether contaminants detected in groundwater have the potential to migrate into enclosed spaces at concentrations exceeding indoor air PCULs. The groundwater SLs are referenced to the standard MTCA Method B SLs from Ecology’s CLARC Table dated January 2023. These screening levels were not incorporated as groundwater PCULs.

## 7.0 FATE AND TRANSPORT

The Y Pay Mor Site consists of CVOC-contaminated soil and groundwater within the shallow aquifer. The CVOC contamination is due to spills and leaks from former dry cleaner operations in two source areas (the Southern Source Area which was where documented spills of PCE occurred within the building and the Northern Source Area where undocumented spills or releases apparently entered an exterior catch basin in the loading dock). PCE was identified as the primary COC in groundwater due to its widespread nature; other COCs including TCE, cis-DCE, and vinyl chloride are also present and are generally breakdown products of PCE.

Overall, the fate and transport of these COCs are affected by their chemical properties and the physical, chemical, and biological processes that they are exposed to. PCE and associated breakdown products are generally polar compounds that have a lower affinity for bonding to soil particles. Chemicals with a strong affinity for soil are less mobile than chemicals with a lower affinity for soil. Additionally, PCE degrades (i.e., breaks down) to TCE, DCEs, vinyl chloride, and ethene based on groundwater conditions and bacterial processes. Other factors that have influenced and will continue to influence the transport of COCs at the Site include the relative locations of the two contaminant sources and a previous floor drain inside the dry cleaner space, and geologic and hydrogeologic parameters in the plume area.

Historically, PCE migrated vertically from the two points of release (source areas) through the soil column. Based on soil analytical results, vertical migration of PCE in the soil was limited by a hard silt aquitard located at approximately Elevation 396 feet. The shallow groundwater aquifer is perched on the aquitard. Dissolved-phase COCs within the shallow aquifer then migrated horizontally downgradient from the source areas, as well as laterally by dispersion and diffusion (these generalized processes are shown on cross Section A-A’, Figure 10). PCE degraded to TCE, DCEs, vinyl chloride, and ethene as a result of natural dechlorination processes. The majority of contaminated source material in the vadose zone was removed by a combination of SVE operations in the 1990s and the 2020 remedial action that removed more than 4,000 tons of CVOC-contaminated soil.

Currently, soil and groundwater contamination is present beneath the northeast portion of the Federal Way Downtown Station construction site as part of the larger FWLE project. The majority of the Site is planned to be paved in 2023. The paved portions will prevent direct exposure and infiltration of stormwater. The migration of COCs in a groundwater plume is also limited by the sorption of these contaminants to fine-grained soils, as evidenced by the detected concentrations in saturated soil at the Site downgradient of the source areas themselves. Additionally, chemical breakdown of CVOCs is evidenced by the presence of TCE, cis-DCE, trans-DCE, vinyl chloride and other geochemical parameters. Overall, groundwater monitoring completed as part of RI indicates that the plume's leading edge is stable, likely due to dilution, sorption and/or natural attenuation. Additionally, analytical results collected in the central portion of the plume also indicate that the magnitude of PCE concentrations has decreased since 2020; this finding is likely due to the removal of a majority of source material in 2020 and the ongoing natural attenuation of CVOCs in groundwater.

## 8.0 NATURE AND EXTENT OF CONTAMINATION

The nature and extent of contamination are evaluated based on the samples collected during various investigations to date that are representative of current conditions on the Site. Soil conditions are represented by a total of 182 samples collected from the Site. Groundwater conditions are represented by 48 groundwater samples collected from 11 monitoring wells in 2022 and 2023. Indoor air has not yet been evaluated. Samples are presented in Tables 7 and 9.

PCE is the primary COC for the Site. PCE breakdown products TCE, cis-DCE, and vinyl chloride are the secondary COCs. The extent of the Site is delineated based on comparing the sample analytical data to the PCULs presented in Section 6.1. The estimated extents of soil and groundwater contamination that currently define the Site are presented in Figure 11. COCs exceeding the PCULs in soil and groundwater and a preliminary discussion of potential COC migration from soil vapor to indoor air are summarized below.

### 8.1. Soil

Representative soil conditions at the Site are characterized by 65 excavation confirmation samples and samples from 27 explorations at depths ranging from Elevation 426 feet to approximately 376 feet (approximately 9.5 to 59.5 feet bgs). Remedial activities completed in 1993 and 2020 resulted in the removal of CVOCs in the vadose zone soil (fill and shallow native units). Remaining soil with one or more COCs at concentrations exceeding PCULs is limited to native soil at depths below the groundwater table. Concentrations of PCE (primary COC) and breakdown products TCE, cis-DCE, and vinyl chloride (secondary COCs) greater than the PCULs remain in soil in the northern portion of the Site within the saturated zone. Concentrations of cis-DCE greater than the PCUL remain in localized areas associated with the southern source. The extent of PCE-contaminated soil is shown in Figure 12 and the extent of PCE breakdown products in soil is shown in Figure 13, as described further below.

- **PCE.** The extent of soil with PCE concentrations exceeding the PCUL (25 soil samples) at the Site is shown on Figure 12; depths in relation to current grade are presented in Table 9 for the corresponding samples. The vertical extent of PCE-contaminated soil is concentrated in saturated-zone soil below the northern source area excavation and does not extend deeper than the confining layer (at approximate Elevation 398 to 402 feet). The highest concentrations of PCE (>20 times the PCUL) in soil are limited to a localized area at the base of the backfilled northern source area excavation; this area is highlighted

in Figure 12. The highest concentration of PCE in soil was 3,000 times the PCUL (sample FL358-MW5A-25-26, 150 mg/kg). Soil samples with PCE concentrations exceeding the PCUL, but less than 20 times the PCUL, also remain at the northern source excavation area and are denoted in Figure 12.

- **TCE.** The extent of soil with TCE concentrations exceeding the PCUL at the Site is characterized by 12 soil samples listed in Table 9, along with the sample depths in relation to current surface grade (Figure 13). The lateral extent of TCE-contaminated soil greater than the PCUL is limited to the northern source area perimeter, with the deepest soil sample at 28 feet bgs (FL358-MW5-28-29). The highest concentration of TCE in soil is 15 times the PCUL (sample FL358-MW5A-25-26, 0.44 mg/kg). The samples with the highest relative TCE concentrations are at the former storm drain where PCE exceedances in soil are greater than 20 times the PCUL.
- **Cis-DCE.** The extent of soil with cis-DCE concentrations exceeding the PCUL at the Site is characterized by 26 soil samples as listed in Table 9, along with the sample depths in relation to current surface grade (Figure 13). The highest concentration of cis-DCE in soil is 145 times the PCUL (sample 358-PH7-15, 0.757 mg/kg). The samples with the highest relative concentrations are located at the former storm drain where PCE concentrations in soil are greater than 20 times the PCUL.
- **Trans-DCE and DCE.** Trans-DCE and DCE were either not detected or detected at concentrations less than the PCULs in soil samples analyzed.
- **Vinyl chloride.** The extent of soil with vinyl chloride concentrations exceeding the PCUL at the Site is characterized by two soil samples as listed in Table 9, along with the sample depths in relation to current surface grade (Figure 13). The vertical extent of vinyl chloride-contaminated soil exceeding the PCUL is 28 feet bgs. The highest concentration of vinyl chloride in soil is three times the PCUL (sample FL358-MW6-24-25, 0.0029 mg/kg). The two samples with concentrations greater than PCUL were located at the limits of the northern source area excavation.

## 8.2. Groundwater

The shallow groundwater conditions at the Site are characterized by 48 samples from four quarterly sampling events in June, August, and November 2022 and March 2023. Other groundwater data that informs the extent of contamination are three groundwater samples collected during groundwater dewatering associated with construction of three downgradient subsurface vaults (FW-A, FW-B and ST-A) approximately 350 to 430 feet to the south and southwest; these samples were analyzed for COCs. The extent of PCE and CVOCs in groundwater is shown in Figures 14 through 17 and summarized in Table 7 and below.

- **PCE.** The extent of groundwater with PCE concentrations exceeding the PCUL at the Site is characterized by data from three monitoring wells (FL358-MW5A, FL358-MW6, and FL358-MW13, Table 7). The highest concentration of PCE in groundwater was approximately 18 times the PCUL (sample FL358-MW5A, 91 µg/L in June 2022).
- **TCE.** The extent of groundwater with TCE concentrations exceeding the PCUL at the Site is characterized by data from two monitoring wells (FL358-MW5A and FL358-MW6, Table 7). The highest concentration of TCE in groundwater was approximately 30 times the PCUL (sample FL358-MW6, 150 µg/L in March 2023).
- **Cis-DCE.** The extent of groundwater with cis-DCE concentrations exceeding the PCUL at the Site is characterized by data from two monitoring wells (FL358-MW5A and FL358-MW6, Table 7). The highest

concentration of cis-DCE in groundwater was approximately two times the PCUL (sample FL358-MW5A, 160 µg/L in March 2023).

- **Trans-DCE and DCE.** Trans-DCE and DCE were either not detected or detected at concentrations less than the PCULs in the groundwater samples analyzed.
- **Vinyl Chloride.** The extent of groundwater with vinyl chloride concentrations exceeding the PCUL at the Site is characterized by data from six monitoring wells (FL358-MW5A, FL358-MW6, FL358-MW7, FL358-MW10, FL358-MW11 and FL358-MW14, Table 7). The highest concentration of vinyl chloride in groundwater was approximately 70 times the PCUL (sample FL358-MW5A, 14 µg/L in March 2023). The lateral extent of vinyl chloride in groundwater is not delineated by the furthest downgradient monitoring well FL358-MW11; however, vinyl chloride was not detected in the groundwater samples collected during dewatering of the downgradient subsurface vaults, which indicates the vinyl chloride plume does not extend further south.

### 8.3. Soil Vapor/Indoor Air

PCE, TCE and vinyl chloride were detected at concentrations exceeding the MTCA Method B SL for VI in groundwater samples collected from wells FL358-MW5A, FL358-MW6, FL358-MW7, FL358-MW10, FL358-MW11, FL358-MW13 and FL358-MW14. Therefore, based on these groundwater sampling results, PCE, TCE and vinyl chloride potentially could migrate into enclosed spaces at concentrations exceeding Method B indoor air PCULs and/or SLs protective of commercial workers.

The nearest existing building is the newly constructed light rail station that includes one indoor security office that will have future commercial worker use and other rooms (bathrooms, entry hallway) for transient passenger use. The closest wells to the station are FL358-MW11 (152 horizontal feet away) and FL358-MW14 (170 horizontal feet away). Ecology VI guidance indicates that buildings located more than 100 feet horizontally from a plume of subsurface VOC contamination are unlikely to experience unacceptable VI impacts. Therefore, based on Ecology's VI Guidance, indoor air vapor intrusion is not considered a complete exposure pathway for the light rail station building.

The boundary of the potential TOD property falls within the northwest portion of the Site. It is recommended to evaluate the risk of potential indoor air vapor intrusion when the location of future TOD building is known, as groundwater COC concentrations are likely to reduce over time.

## 9.0 SUMMARY AND CONCLUSIONS OF UPDATED RI

The Y Pay Mor Site is delineated by the extent of COCs PCE, TCE, cis-DCE and vinyl chloride exceeding PCULs for soil and/or groundwater. The sources of Site COCs are two historic PCE spills inside the Y Pay Mor Drycleaner space during the time the drycleaner was in operation, and releases of PCE onto the ground near to, or into, the loading dock storm drain. The majority of contaminated source material in the vadose zone was removed by a combination of SVE operations in the 1990s and the 2020 remedial action that removed more than 4,000 tons of CVOC-contaminated soil.

CVOC contamination remaining in soil is limited to the glacial deposits within the shallow aquifer. The deeper aquifer has not been impacted based on the soil chemical analytical results collected within the hard silt aquitard located between the shallow and deeper aquifers.

The Site is characterized by 182 soil samples representing current conditions remaining in place following the conclusion of interim remedial actions and groundwater data at 11 monitoring wells that have been sampled quarterly for at least four events in 2022 and 2023. The primary COC is PCE. The secondary COCs are TCE, cis-DCE, and vinyl chloride (breakdown products). Dechlorination of PCE is actively occurring based on the presence of breakdown products and geochemical results.

Delineation of PCE and associated breakdown products in soil has been established with one exception. The western horizontal boundary of DCE is not delineated based on the analytical results in boring 358-B15.

Delineation of PCE in groundwater is established to the north, south, east and southwest; however, at the northwest boundary, PCE in groundwater periodically exceeds the PCUL and the northwest plume limits are not firmly established. Delineation of TCE and cis-DCE in groundwater is established throughout the Site. Delineation of vinyl chloride in groundwater is established to the north, east and northwest; however southern and southwest boundaries have not been fully delineated. Available data indicate, however, that the overall plume does not appear to extend beyond the boundaries of the FL358 parcel to the south and southwest given the sampling results for groundwater collected during dewatering in the area of new vaults. The downgradient edge of the Site appears stable as a result of dilution, sorption and/or natural attenuation processes; continued downgradient migration of the Y Pay Mor plume does not appear to be occurring. These findings will be validated by continued groundwater monitoring.

Pavement in the ROW, sidewalks and/or parking areas in the future will be beneficial to eliminating or reducing potential exposures because direct contact with CVOC contamination will be prevented and infiltration of precipitation and stormwater will be limited. The RCs provide additional protections under current conditions because Ecology approval is required prior to any actions that may cause a release or exposure of CVOCs to the environment.

Impacts to drinking water from the Site are not anticipated based on the distance between the Site and groundwater supply wells. The boundary of the 10-year wellhead protection zone for the Lakehaven Group A public water supply well is situated approximately 1,100 feet away from, and downgradient of, the anticipated edge of the Site and 550 feet from the southern and western boundary of the FL358 parcel. Additionally, the Lakehaven public water supply well screen is not completed in the same shallow aquifer as the Site. While the exact locations of identified domestic Group D wells are not known, one well could be located as close as 400 feet to the edge of the FL358 Parcel and 900 feet downgradient of the anticipated extent of the Site based on the King County Groundwater Resources map. However, the water rights for these Group D wells may not be active based on the Ecology Water Rights Search. Further research to validate the actual well locations and active water rights may be necessary in the future depending on groundwater monitoring results from ongoing groundwater monitoring and supplemental well installation.

Vapor intrusion is not a risk for indoor air in the new station building based on the distance between the groundwater plume and the building. Potential soil vapor intrusion to indoor air in future TOD buildings will be evaluated once future building locations are known.

Additional groundwater monitoring is planned to supplement the interpretation of groundwater contaminant trends and geochemical conditions to support a feasibility study in the future. Additional groundwater monitoring wells are planned to be installed in the southern and western extents of the Site

and monitoring data will be used to better define the plume boundary. The additional monitoring wells are planned to be installed following completion of FWLE construction.

## 10.0 LIMITATIONS

We have prepared this report for the exclusive use by Sound Transit, their authorized agents, and regulatory agencies for the Y Pay Mor Site located in Federal Way, Washington. No other party may rely on the product of our services unless we agree in advance and in writing to such reliance. Within the limitations of scope, schedule, and budget, our services have been executed in accordance with generally accepted environmental science practices in this area at the time this report was prepared. No warranty or other conditions, express or implied, should be understood.

Any electronic form, facsimile or hard copy of the original document (email, text, table, and/or figure), if provided, and any Appendices are only a copy of the original document. The original document is stored by GeoEngineers, Inc. and will serve as the official document of record. Please refer to the Appendix G titled "Report Limitations and Guidelines for Use" for additional information pertaining to use of this report.

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**Table 1**  
**Boring and Test Pit Depths, Monitoring Well Construction, and Hydraulic Conductivities**  
Y Pay Mor Site Updated RI  
Federal Way, Washington

Location Identification <sup>1</sup>	Date Drilled or Installed	Type	Exploratory Method	Ground Surface Elevation at Time of Drilling <sup>2</sup> (feet)	Top of Casing Elevation (feet) <sup>2</sup>	Total Depth of Boring at Time of Drilling (feet bgs)	Screened Interval Depth at Time of Drilling (feet bgs)	Average Hydraulic Conductivity <sup>3</sup> (feet/day)
<b>Preliminary Remedial Investigation and Interim Action (RZA AGRA 1994) (See Figure 4)</b>								
BW-1	06/10/1992	Boring	HSA	426.37	--	20	--	--
BW-2/MW-1	06/10/1992	Groundwater Well	HSA	426.37	--	20	10 - 20	--
BW-3	06/10/1992	Boring	HSA	426.37	--	15	--	--
BW-4	06/10/1992	Boring	HSA	426.37	--	15	--	--
B5/MW-2 (Y Pay Mor-MW2)	08/25/1992	Groundwater Well	HSA	428	--	20	9 - 19	--
B6/VP-1 <sup>4</sup>	08/26/1992	SVE Well Point	HSA	426.37	--	7.5	0 - 7.5	--
B7/VP-2 <sup>4</sup>	08/26/1992	SVE Well Point	HSA	426.37	--	7.5	0 - 7.5	--
B8/VP-3 <sup>4</sup>	08/27/1992	SVE Well Point	HSA	426.37	--	7.5	0 - 7.5	--
B9/VP-4 <sup>4</sup>	08/27/1992	SVE Well Point	HSA	426.37	--	8	0 - 7.5	--
B10/VP-5 <sup>4</sup>	08/28/1992	SVE Well Point	HSA	426.37	--	7.5	0 - 7.5	--
B1/VP-6 <sup>4</sup> (former BW-2/MW-1)	08/28/1992	SVE Well Point	HSA	426.37	--	8	0 - 7.5	--
B11/MW-3 (Y Pay Mor-MW3)	10/27/1992	Groundwater Well	HSA	424	--	15	7 - 14	--
B-12	10/27/1992	Boring	HSA	426.37	--	16.5	--	--
VP-7	Unknown	SVE Well Point	Unknown	426.37	--	10	3 - 10	--
CB-1 <sup>5</sup>	11/16/1994	Boring	HSA	426.37	--	8	--	--
CB-2 <sup>5</sup>	11/16/1994	Boring	HSA	426.37	--	6.5	--	--
CB-3 <sup>5</sup>	11/16/1994	Boring	HSA	426.37	--	6.5	--	--
CB-4 <sup>5</sup>	11/16/1994	Boring	HSA	426.37	--	6.5	--	--
CB-5 <sup>5</sup>	11/16/1994	Boring	HSA	426.37	--	8	--	--
CB-6 <sup>5</sup>	11/16/1994	Boring	HSA	426.37	--	6.5	--	--
CB-7 <sup>5</sup>	11/16/1994	Boring	HSA	426.37	--	6.5	--	--
<b>Phase II ESA (GeoEngineers 2017)</b>								
FL358-B1	10/05/2017	Boring	Direct-Push	423.5	--	20	--	--
FL358-B3	10/05/2017	Boring	Direct-Push	425.6	--	20	--	--
FL358-MW1	10/02/2017	Groundwater Well	Sonic	425.59	425.18	26	6 - 25	--
FL358-MW2	10/02/2017	Groundwater Well	Sonic	425.37	424.99	25	6 - 24	--
FL358-MW3	10/03/2017	Groundwater Well	Sonic	424.34	423.92	20	8 - 19.5	--
FL358-MW4	10/03/2017	Groundwater Well	Sonic	424.8	424.3	20	8 - 19.5	--
<b>Supplemental Investigation (OSG 2020 and 2021)</b>								
358-B1	05/07/2020	Boring	HSA	424	--	25.5	--	--
358-B2	05/07/2020	Boring	HSA	427	--	25.5	--	--
358-B3	05/07/2020	Boring	HSA	423	--	25.5	15 - 20	--
358-B4	05/08/2020	Boring	HSA	427	--	25.5	20 - 25	--
358-B5	05/08/2020	Boring	HSA	426.37	--	25.5	15 - 25	--
358-B6	05/08/2020	Boring	HSA	426.37	--	25.5	15 - 25	--
358-B7	05/11/2020	Boring	HSA	426.37	--	25.5	15 - 25	--
358-B8	05/11/2020	Boring	HSA	426.37	--	25.5	--	--
358-B9	05/11/2020	Boring	HSA	426.37	--	25.5	--	--
358-B10	06/09/2020	Boring	HSA	426.37	--	50	--	--
358-B11	06/12/2020	Boring	HSA	425.06	424.93	26.5	15 - 25	--
358-B12	06/10/2020	Boring	HSA	426.37	--	35.6	--	--
358-B13	06/11/2020	Boring	HSA	425.51	425.51	26.5	15 - 25	--
358-B14	06/11/2020	Boring	HSA	426.47	426.99	31	15 - 25	--
358-B15	06/11/2020	Boring	HSA	425.61	426.04	26.5	15 - 25	--
358-PH1	06/09/2020	Test Pit	--	426	--	~10	--	--
358-PH2	06/10/2020	Test Pit	--	426	--	~10	--	--
358-PH3	06/09/2020	Test Pit	--	426	--	~10	--	--
358-PH4	06/09/2020	Test Pit	--	426	--	~10	--	--
358-PH5	06/10/2020	Test Pit	--	426	--	~10	--	--
358-PH6	06/10/2020	Test Pit	--	426	--	~10	--	--
358-PH7	06/10/2020	Test Pit	--	422	--	~15	--	--
358-PH8	06/10/2020	Test Pit	--	426	--	~5	--	--
<b>Additional Investigation (Shannon &amp; Wilson 2022)</b>								
FL358-MW5A	06/22/2022	Groundwater Well	Sonic	435.50	435.70	27	21 - 26	4.06
FL358-MW5B	06/21/2022	Groundwater Well	Sonic	435.50	435.66	40	32 - 37	1.67
FL358-MW6	06/21/2022	Groundwater Well	Sonic	435.73	435.64	40	17 - 37	0.51
FL358-MW7	06/20/2022	Groundwater Well	Sonic	433.61	433.50	35	14 - 34	--
FL358-MW8	06/15/2022	Groundwater Well	Sonic	435.67	435.87	40	18 - 38	--
FL358-MW9	06/16/2022	Groundwater Well	Sonic	435.41	435.50	45	21 - 41	--
FL358-MW10	06/13/2022	Groundwater Well	Sonic	433.91	433.97	40	18 - 38	--
FL358-MW11	06/14/2022	Groundwater Well	Sonic	432.94	432.78	35	15 - 35	--
FL358-MW12	06/20/2022	Groundwater Well	Sonic	435.24	435.11	40	18 - 38	--
FL358-MW13	06/14/2022	Groundwater Well	Sonic	435.53	435.68	42.5	21 - 41	--
FL358-MW14	06/15/2022	Groundwater Well	Sonic	434.44	434.32	40	19 - 39	0.13

**Notes:**

<sup>1</sup> Approximate monitoring well locations are shown on Figures 4, 5, 7, and 8. Soil vapor survey points are not included in this table.

<sup>2</sup> Elevation measurements are relative to NAVD88 datum and reflect surface at time of drilling. Elevations prior to 2017 were estimated from a 2018 ground surface topographic survey. 2017 elevations were obtained from the Phase II ESA reports and 2020 elevation survey. 2020 and 2022 elevations were based on an elevation survey of the boring location provided by Kiewit. Significant figures presented are a function of the precision of the reference elevation or as reported by surveyors.

<sup>3</sup> Hydraulic conductivity values were estimated based on Bouwer and Rice 1976 method of slug testing.

<sup>4</sup> Locations were identified as borings, completed with well screens within the vadose zone and connected to the soil vapor extraction system.

<sup>5</sup> Locations were identified as Confirmation Boring B-# in the 1994 report. The location identification was modified in this RI to CB-# distinguish between the 1992 borings and the 1994 borings.

-- = data not available

SVE = soil vapor extraction

bgs = below ground surface

HSA = hollow stem auger

feet/day = feet per day

**Table 2**  
**Pre-2020 Remedial Excavation Soil Chemical Analytical Data**  
Y Pay Mor Site Updated RI  
Federal Way, Washington

Location Identification <sup>1</sup>	Sample Identification	Sample Date	Start Depth <sup>2</sup> (feet bgs)	End Depth <sup>2</sup> (feet bgs)	Sample Representative of Soil Still Present as of 2022	VOCs <sup>3</sup> (mg/kg)						
						PCE Breakdown Products						1,1,2,2- Tetrachloroethane
						Tetrachloroethene (PCE)	Trichloroethene (TCE)	cis-1,2- Dichloroethene	trans-1,2- Dichloroethene	1,1- Dichloroethene	Vinyl Chloride	
Preliminary Cleanup Levels <sup>4</sup> (mg/kg)						0.05	0.03	0.0052	0.032	0.0025	0.001	0.001
<b>Preliminary RI and Interim Action (RZA AGRA 1994)</b>												
BW-1	BW-1-2	06/10/1992	10	10	NR	<b>0.002 J</b>	0.006 U	<b>0.002 J</b>	0.006 U	0.006 U	0.011 U	0.006 U
	BW-1-3	06/10/1992	15	15	NR	0.006 U	0.006 U	0.006 U	0.006 U	0.006 U	0.011 U	0.006 U
	BW-1-4	06/10/1992	20	20	NR	0.006 U	0.006 U	0.006 U	0.006 U	0.006 U	0.012 U	0.006 U
BW-2/MW-1	BW-2-1	06/10/1992	5	5	NR	<b>&gt;160 E</b>	<b>7.5</b>	<b>3.9</b>	<b>5.6</b>	0.76 U	0.53 U	<b>3.1</b>
	BW-2-1DL	06/10/1992	5	5	NR	<b>260 D</b>	7.6 U	<b>4.5 D J</b>	7.6 U	7.6 U	15 U	7.6 U
	BW-2-2	06/10/1992	10	10	NR	<b>0.34</b>	0.029 U	0.029 U	0.029 U	0.029 U	0.057 U	0.029 U
	BW-2-3	06/10/1992	15	15	NR	<b>0.055</b>	0.006 U	<b>0.001 J</b>	0.006 U	0.006 U	0.0011 U	0.006 U
	BW-2-4	06/10/1992	20	20	NR	<b>&gt;39 E</b>	0.78 U	<b>0.25 J</b>	0.78 U	0.78 U	1.6 U	0.78 U
	BW-2-4DL	06/10/1992	20	20	NR	<b>53 D</b>	1.6 U	<b>1.4 D J</b>	1.6 U	1.6 U	3.1 U	1.6 U
BW-3	BW-3-1	06/10/1992	5	5	NR	<b>0.028</b>	<b>0.002 J</b>	<b>0.010</b>	0.007 U	0.007 U	0.013 U	0.007 U
	BW-3-2	06/10/1992	10	10	NR	<b>0.002 J</b>	<b>0.006 J</b>	<b>0.002 J</b>	0.006 U	0.006 U	0.012 U	0.006 U
	BW-3-3	06/10/1992	15	15	NR	0.006 U	0.006 U	0.006 U	0.006 U	0.006 U	0.011 U	0.006 U
	BW-3-3B	06/10/1992	Unknown	Unknown	NR	<b>0.02</b>	<b>0.033</b>	<b>0.048</b>	<b>0.002 J</b>	0.005 U	0.01 U	0.005 U
BW-4	BW-4-1	06/10/1992	5	5	NR	<b>0.013</b>	0.007 U	<b>0.066</b>	0.007 U	0.007 U	0.014 U	0.007 U
	BW-4-1RE	06/10/1992	5	5	NR	<b>0.011</b>	0.007 U	<b>0.056</b>	0.007 U	0.007 U	0.014 U	0.007 U
	BW-4-2	06/10/1992	10	10	NR	0.006 U	0.006 U	0.006 U	0.006 U	0.006 U	0.012 U	0.006 U
	BW-4-3	06/10/1992	15	15	NR	0.006 U	0.006 U	0.006 U	0.006 U	0.006 U	0.011 U	0.006 U
B5/MW-2 (Y Pay Mor-MW2 <sup>5</sup> )	B5-S4	08/31/1992	10	10	NR	0.006 U	0.006 U	0.006 U	0.006 U	0.006 U	0.012 U	0.006 U
	B5-S8	08/31/1992	20	20	NR	0.006 U	0.006 U	0.006 U	0.006 U	0.006 U	0.011 U	0.006 U
B6/VP-1 <sup>6</sup>	B6-S2	08/31/1992	5	5	NR	<b>0.062</b>	0.006 U	<b>0.003 J</b>	0.006 U	0.006 U	0.011 U	0.006 U
	B6-S3	08/31/1992	7.5	7.5	NR	<b>0.004 J</b>	0.007 U	<b>0.003 J</b>	0.007 U	0.007 U	0.014 U	0.007 U
B7/VP-2 <sup>6</sup>	B7-S2 <sup>7</sup>	08/31/1992	5	5	NR	<b>0.46 J</b>	0.006 U	<b>0.24 J</b>	<b>0.003 J</b>	0.006 U	0.011 U	0.006 U
	B7-S2DL	08/31/1992	5	5	NR	<b>0.57 D</b>	0.029 U	<b>0.42 J</b>	0.029 U	0.029 U	0.057 U	0.029 U
	B7-S3	08/31/1992	7.5	7.5	NR	0.006 U	0.006 U	0.006 U	0.006 U	0.006 U	0.011 U	0.006 U
B8/VP-3 <sup>6</sup>	B8-S2	08/31/1992	5	5	NR	0.006 U	0.006 U	<b>0.001 J</b>	0.006 U	0.006 U	0.012 U	0.006 U
	B8-S3	08/31/1992	7.5	7.5	NR	0.006 U	0.006 U	0.006 U	0.006 U	0.006 U	0.011 U	0.006 U
B9/VP-4 <sup>6</sup>	B9-S2	08/31/1992	5	5	NR	<b>0.015</b>	0.006 U	<b>0.011</b>	0.006 U	0.006 U	0.012 U	0.006 U
	B9-S3	08/31/1992	7.5	7.5	NR	0.006 U	0.006 U	0.006 U	0.006 U	0.006 U	0.011 U	0.006 U
B10/VP-5 <sup>6</sup>	B10-S1	08/31/1992	2.5	2.5	NR	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.011 U	0.005 U
	B10-S1DL	08/31/1992	2.5	2.5	NR	0.69 U	0.69 U	0.69 U	0.69 U	0.69 U	1.4 U	0.69 U
	B10-S2	08/31/1992	5	5	NR	0.005 U	0.005 U	<b>0.003 J</b>	0.005 U	0.005 U	0.011 U	0.005 U
	B10-S2DL	08/31/1992	5	5	NR	0.68 U	0.68 U	<b>0.34 D J</b>	0.68 U	0.68 U	1.4 U	0.68 U
	B10-S3	08/31/1992	7.5	7.5	NR	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.011 U	0.005 U
B11/MW-3 (Y Pay Mor-MW3 <sup>5</sup> )	B11_S-3	10/27/1992	7.5	7.5	NR	0.006 U	0.006 U	0.006 U	0.006 U	0.006 U	0.012 U	0.006 U
	B11_S-5	10/27/1992	12.5	12.5	NR	0.006 U	0.006 U	0.006 U	0.006 U	0.006 U	0.011 U	0.006 U
	B11_S-6	10/27/1992	15	15	NR	0.006 U	0.006 U	0.006 U	0.006 U	0.006 U	0.011 U	0.006 U

Location Identification <sup>1</sup>	Sample Identification	Sample Date	Start Depth <sup>2</sup> (feet bgs)	End Depth <sup>2</sup> (feet bgs)	Sample Representative of Soil Still Present as of 2022	VOCs <sup>3</sup> (mg/kg)						
						PCE Breakdown Products						1,1,2,2- Tetrachloroethane
						Tetrachloroethene (PCE)	Trichloroethene (TCE)	cis-1,2- Dichloroethene	trans-1,2- Dichloroethene	1,1- Dichloroethene	Vinyl Chloride	
Preliminary Cleanup Levels <sup>4</sup> (mg/kg)						0.05	0.03	0.0052	0.032	0.0025	0.001	0.001
B12	B12_S-1	10/27/1992	2.5	2.5	NR	1,700 E	6.9 U	6.9 U	6.9 U	6.9 U	14 U	6.9 U
	B12_S-1DL	10/27/1992	2.5	2.5	NR	7,200	690 U	690 U	690 U	690 U	1400 U	690 U
	B12_S-2	10/27/1992	5	5	NR	11	0.71 U	0.26 J	0.71 U	0.71 U	1.4 U	0.71 U
	B12_S-3	10/27/1992	7.5	7.5	NR	0.007	0.005 U	0.005 U	0.005 U	0.005 U	0.011 U	0.005 U
	B12_S-3B <sup>8</sup>	10/27/1992	10	10	NR	1.2 E	0.006 U	0.006 U	0.006 U	0.006 U	0.011 U	0.006 U
	B12_S-3BDL <sup>8</sup>	10/27/1992	10	10	NR	1.2 D	0.7 U	0.7 U	0.7 U	0.7 U	1.4 U	0.7 U
	B12_S-4	10/27/1992	12.5	12.5	NR	0.006 U	0.006 U	0.006 U	0.006 U	0.006 U	0.011 U	0.006 U
B12_S-5	10/27/1992	15	15	NR	0.006 U	0.006 U	0.006 U	0.006 U	0.006 U	0.011 U	0.006 U	
CB-1 <sup>9</sup>	B-1/S-1	11/16/1994	6.5	8	NR	0.1 U	--	0.1 U	--	--	--	--
CB-2 <sup>9</sup>	B-2/S-1	11/16/1994	5	6.5	NR	0.1 U	--	0.1 U	--	--	--	--
CB-3 <sup>9</sup>	B-3/S-1	11/16/1994	5	6.5	NR	0.1 U	--	0.11	--	--	--	--
CB-4 <sup>9</sup>	B-4/S-1	11/16/1994	5	6.5	NR	1.3	--	0.33	--	--	--	--
CB-5 <sup>9</sup>	B-5/S-1	11/16/1994	6.5	8	NR	0.1 U	--	71	0.59	--	--	--
CB-6 <sup>9</sup>	B-6/S-1	11/16/1994	5	6.5	NR	0.1 U	--	0.1 U	--	--	--	--
CB-7 <sup>9</sup>	B-7/S-1	11/16/1994	5	6.5	NR	0.1 U	--	0.75	--	--	--	--
Phase II ESA (GeoEngineers 2017)												
FL358-B1	FL358-B1-0.5-1	10/05/2017	0.5	1	Removed	0.0011 U	0.0011 U	0.0011 U	0.0011 U	0.0011 U	0.0011 U	0.0011 U
	FL358-B1-5-6	10/05/2017	5	6	Removed	0.00097 U	0.00097 U	0.0053	0.00097 U	0.00097 U	0.00097 U	0.057 U
	FL358-B1-10-11	10/05/2017	10	11	Removed	0.016	0.0076	0.014	0.0010 U	0.0010 U	0.0010 U	0.0010 U
	FL358-B1-13-14	10/05/2017	13	14	Yes	0.066	0.0022	0.0043	0.00080 U	0.00080 U	0.00080 U	0.00080 U
FL358-B3	FL358-B3-5-6	10/05/2017	5	6	Yes	0.00098 U	0.00098 U	0.00098 U	0.00098 U	0.00098 U	0.00098 U	0.00098 U
	FL358-B3-7-8	10/05/2017	7	8	Yes	0.0012 U	0.0012 U	0.0012 U	0.0012 U	0.0012 U	0.0012 U	0.0012 U
	FL358-B3-12-13	10/05/2017	12	13	Yes	0.0015 U	0.0015 U	0.0015 U	0.0015 U	0.0015 U	0.0019 U	0.068 U
FL358-MW1	FL358-MW1-1.5-2.5	10/02/2017	1.5	2.5	Yes	0.00098 U	0.00098 U	0.00098 U	0.00098 U	0.00098 U	0.00098 U	0.00098 U
	FL358-MW1-5-6	10/02/2017	5	6	Yes	0.00091 U	0.00091 U	0.00091 U	0.00091 U	0.00091 U	0.00091 U	0.00091 U
	FL358-MW1-12-13	10/02/2017	12	13	Yes	0.00099 U	0.00099 U	0.00099 U	0.00099 U	0.00099 U	0.00099 U	0.00099 U
	FL358-MW1-19-20	10/02/2017	19	20	Yes	0.0049	0.0033	0.0016	0.00084 U	0.00084 U	0.00084 U	0.00084 U
FL358-MW2	FL358-MW2-1.5-2.5	10/02/2017	1.5	2.5	Yes	0.0011 U	0.0011 U	0.0011 U	0.0011 U	0.0011 U	0.0011 U	0.065 U
	FL358-MW2-9-10	10/02/2017	9	10	Yes	0.00087 U	0.00087 U	0.00087 U	0.00087 U	0.00087 U	0.00087 U	0.00087 U
	FL358-MW2-13-14	10/02/2017	13	14	Yes	0.00088 U	0.00088 U	0.00088 U	0.00088 U	0.00088 U	0.00088 U	0.00088 U
FL358-MW3	FL358-MW3-4-5	10/03/2017	4	5	Yes	0.00095 U	0.00095 U	0.00095 U	0.00095 U	0.00095 U	0.00095 U	0.00095 U
	FL358-MW3-7-8	10/03/2017	7	8	Yes	0.00089 U	0.00089 U	0.00089 U	0.00089 U	0.00089 U	0.00089 U	0.00089 U
	FL358-MW3-11-12	10/03/2017	11	12	Yes	0.00078 U	0.00078 U	0.00078 U	0.00078 U	0.00078 U	0.00078 U	0.00078 U
FL358-MW4	FL358-MW4-6.5-7.5	10/03/2017	6.5	7.5	Yes	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.065 U
	FL358-MW4-8.5-9.5	10/03/2017	8.5	9.5	Yes	0.00094 U	0.00094 U	0.00094 U	0.00094 U	0.00094 U	0.0012 U	0.00094 U
Supplemental Investigation (OSG 2020)												
358-B1	358-B1-10	05/07/2020	10	11	Yes	0.028 U	0.0224 U	0.0224 U	0.0224 U	0.0224 U	0.028 U	0.0224 U
	358-B1-20	05/07/2020	20	20.5	Yes	0.0224 U	0.0179 U	0.0179 U	0.0179 U	0.0179 U	0.0224 U	0.0179 U
358-B2	358-B2-12.5	05/07/2020	12	13	Yes	0.0317 U	0.0253 U	0.0253 U	0.0253 U	0.0253 U	0.0317 U	0.0253 U
	358-B2-25	05/07/2020	25	25.5	Yes	0.0297 U	0.0238 U	0.0238 U	0.0238 U	0.0238 U	0.0297 U	0.0238 U
358-B3	358-B3-10	05/07/2020	10	11	Yes	0.0254 U	0.0204 U	0.0204 U	0.0204 U	0.0204 U	0.0254 U	0.0204 U
	358-B3-12.5	05/07/2020	12	13.5	Yes	0.083	0.0196 U	0.0235	0.0196 U	0.0196 U	0.0244 U	0.0196 U
	358-B3-15	05/07/2020	15	16.5	Yes	0.121	0.0379	0.0669	0.0171 U	0.0171 U	0.0214 U	0.0171 U
	358-B3-20	05/07/2020	20	20.5	Yes	0.0384	0.0189 U	0.0189 U	0.0189 U	0.0189 U	0.0236 U	0.0189 U

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						PCE Breakdown Products						1,1,2,2- Tetrachloroethane
						Tetrachloroethene (PCE)	Trichloroethene (TCE)	cis-1,2- Dichloroethene	trans-1,2- Dichloroethene	1,1- Dichloroethene	Vinyl Chloride	
Preliminary Cleanup Levels <sup>4</sup> (mg/kg)						0.05	0.03	0.0052	0.032	0.0025	0.001	0.001
358-B4	358-B4-15	05/08/2020	15	16	Yes	0.0344 U	0.0275 U	0.0275 U	0.0275 U	0.0275 U	0.0344 U	0.0275 U
	358-B4-20	05/08/2020	20	21.5	Yes	0.0294 U	0.0235 U	0.0235 U	0.0235 U	0.0235 U	0.0294 U	0.0235 U
358-B5	358-B5-2.5	05/08/2020	2.5	4	Yes	0.0382 U	0.0306 U	0.0306 U	0.0306 U	0.0306 U	0.0382 U	0.0306 U
	358-B5-5	05/08/2020	5	6.5	Yes	0.0321 U	0.0257 U	<b>0.081</b>	0.0257 U	0.0257 U	0.0321 U	0.0257 U
	358-B5-10	05/08/2020	10	11.5	Yes	0.0281 U	0.0225 U	0.0225 U	0.0225 U	0.0225 U	0.0281 U	0.0225 U
	358-B5-15	05/08/2020	15	16.5	Yes	0.0275 U	0.022 U	0.022 U	0.022 U	0.022 U	0.0275 U	0.022 U
	358-B5-20	05/08/2020	20	21	Yes	<b>0.358</b>	0.0188 U	0.0188 U	0.0188 U	0.0188 U	0.0234 U	0.0188 U
	358-B5-25	05/08/2020	25	25.5	Yes	<b>0.123</b>	0.0236 U	0.0236 U	0.0236 U	0.0236 U	0.0295 U	0.0236 U
358-B6	358-B6-5	05/08/2020	5	6.5	Yes	0.0395 U	0.0316 U	<b>0.0949</b>	0.0316 U	0.0316 U	0.0395 U	0.0316 U
	358-B6-10	05/08/2020	10	11.5	Yes	0.0233 U	0.0187 U	0.0187 U	0.0187 U	0.0187 U	0.0233 U	0.0187 U
	358-B6-20	05/08/2020	20	20.5	Yes	<b>0.0269</b>	0.0197 U	0.0197 U	0.0197 U	0.0197 U	0.0246 U	0.0197 U
358-B7	358-B7-5	05/11/2020	5	6.5	Removed	<b>0.0438</b>	0.0185 U	<b>0.0509</b>	0.0185 U	0.0185 U	0.0231 U	0.0185 U
	358-B7-10	05/11/2020	10	11	Yes	0.0218 U	0.0174 U	0.0174 U	0.0174 U	0.0174 U	0.0218 U	0.0174 U
	358-B7-20	05/11/2020	20	21	Yes	0.0213 U	0.017 U	<b>0.0245</b>	0.017 U	0.017 U	0.0213 U	0.017 U
358-B8	358-B8-2.5	05/11/2020	2.5	4	Removed	<b>0.0539</b>	0.0208 U	0.0208 U	0.0208 U	0.0208 U	0.026 U	0.0208 U
	358-B8-5	05/11/2020	5	6.5	Removed	0.0331 U	0.0265 U	<b>0.205</b>	0.0265 U	0.0265 U	0.0331 U	0.0265 U
	358-B8-12.5	05/11/2020	12.5	13	Yes	0.0249 U	0.0199 U	0.0199 U	0.0199 U	0.0199 U	0.0249 U	0.0199 U
	358-B8-20	05/11/2020	20	20.5	Yes	0.0305 U	0.0244 U	0.0244 U	0.0244 U	0.0244 U	0.0305 U	0.0244 U
358-B9	358-B9-2.5	05/11/2020	2.5	4	Yes	0.0396 U	0.0317 U	0.0317 U	0.0317 U	0.0317 U	0.0396 U	0.0317 U
	358-B9-7.5	05/11/2020	7.5	9	Yes	0.0124 U	0.00989 U	0.00989 U	0.00989 U	0.00989 U	0.0124 U	0.00989 U
	358-B9-12.5	05/11/2020	12.5	13.5	Yes	0.0219 U	0.0175 U	0.0175 U	0.0175 U	0.0175 U	0.0219 U	0.0175 U
	358-B9-20	05/11/2020	20	20.5	Yes	0.0276 U	0.0221 U	0.0221 U	0.0221 U	0.0221 U	0.0276 U	0.0221 U
358-B10	358-B10-0.5	06/09/2020	0.5	2	Yes	0.0282 U	0.0226 U	0.0226 U	0.0226 U	0.0226 U	0.0282 U	0.0226 U
	358-B10-25	06/09/2020	25	25.5	Yes	0.0122 U	0.00976 U	0.00976 U	0.00976 U	0.00976 U	0.0122 U	0.00976 U
	358-B10-30	06/09/2020	30	30.5	Yes	0.0227 U	0.0182 U	0.0182 U	0.0182 U	0.0182 U	0.0227 U	0.0182 U
	358-B10-35	06/09/2020	35	36	Yes	0.0209 U	0.0167 U	0.0167 U	0.0167 U	0.0167 U	0.0209 U	0.0167 U
	358-B10-40	06/09/2020	40	40.75	Yes	0.0224 U	0.0179 U	0.0179 U	0.0179 U	0.0179 U	0.0224 U	0.0179 U
	358-B10-45	06/09/2020	45	45.75	Yes	0.0262 U	0.0209 U	0.0209 U	0.0209 U	0.0209 U	0.0262 U	0.0209 U
358-B11	358-B10-50	06/09/2020	50	50.5	Yes	0.0311 U	0.0249 U	0.0249 U	0.0249 U	0.0249 U	0.0311 U	0.0249 U
	358-B11-1	06/10/2020	1	2.5	Yes	0.0199 U	0.0159 U	0.0159 U	0.0159 U	0.0159 U	0.0199 U	0.0159 U
	358-B11-2.5	06/10/2020	2.5	4	Yes	0.0368 U	0.0294 U	0.0294 U	0.0294 U	0.0294 U	0.0368 U	0.0294 U
	358-B11-10	06/10/2020	10	11.5	Yes	0.0235 U	0.0188 U	0.0188 U	0.0188 U	0.0188 U	0.0235 U	0.0188 U
358-B12	358-B11-25	06/10/2020	25	26.5	Yes	0.0279 U	0.0223 U	0.0223 U	0.0223 U	0.0223 U	0.0279 U	0.0223 U
	358-B12-2.5	06/10/2020	2.5	4	Removed	0.0257 U	0.0206 U	0.0206 U	0.0206 U	0.0206 U	0.0257 U	0.0206 U
	358-B12-7.5	06/10/2020	7.5	9	Removed	<b>0.319</b>	<b>0.110</b>	<b>0.0289</b>	0.0207 U	0.0207 U	0.0259 U	0.0207 U
	358-B12-15	06/10/2020	15	16.5	Yes	<b>0.387</b>	<b>0.0612</b>	0.0186 U	0.0186 U	0.0186 U	0.0232 U	0.0186 U
	358-B12-25	06/10/2020	25	26	Yes	<b>0.0600</b>	0.027 U	0.027 U	0.027 U	0.027 U	0.0338 U	0.027 U
358-B13	358-B12-30	06/10/2020	30	30.75	Yes	0.0254 U	0.0203 U	0.0203 U	0.0203 U	0.0203 U	0.0254 U	0.0203 U
	358-B13-2.5	06/11/2020	2.5	4	Yes	0.0328 U	0.0263 U	0.0263 U	0.0263 U	0.0263 U	0.0328 U	0.0263 U
	358-B13-10	06/11/2020	10	11.5	Yes	0.0286 U	0.0229 U	0.0229 U	0.0229 U	0.0229 U	0.0286 U	0.0229 U
	358-B13-20	06/11/2020	20	21.5	Yes	0.0233 U	0.0187 U	0.0187 U	0.0187 U	0.0187 U	0.0233 U	0.0187 U
	358-B13-25	06/11/2020	25	26.5	Yes	0.0227 U	0.0182 U	0.0182 U	0.0182 U	0.0182 U	0.0227 U	0.0182 U

Location Identification <sup>1</sup>	Sample Identification	Sample Date	Start Depth <sup>2</sup> (feet bgs)	End Depth <sup>2</sup> (feet bgs)	Sample Representative of Soil Still Present as of 2022	VOCs <sup>3</sup> (mg/kg)						
						PCE Breakdown Products						1,1,2,2- Tetrachloroethane
						Tetrachloroethene (PCE)	Trichloroethene (TCE)	cis-1,2- Dichloroethene	trans-1,2- Dichloroethene	1,1- Dichloroethene	Vinyl Chloride	
Preliminary Cleanup Levels <sup>4</sup> (mg/kg)						0.05	0.03	0.0052	0.032	0.0025	0.001	0.001
358-B14	358-B14-7.5	06/11/2020	7.5	9	Yes	0.0216 U	0.0173 U	0.0173 U	0.0173 U	0.0173 U	0.0216 U	0.0173 U
	358-B14-10	06/11/2020	10	11.5	Yes	0.0225 U	0.018 U	0.018 U	0.018 U	0.018 U	0.0225 U	0.018 U
	358-B14-12.5	06/11/2020	12.5	14	Yes	0.0316 U	0.0253 U	0.0253 U	0.0253 U	0.0253 U	0.0316 U	0.0253 U
	358-B14-15	06/11/2020	15	16.5	Yes	0.0387 U	0.031 U	0.031 U	0.031 U	0.031 U	0.0387 U	0.031 U
	358-B14-20	06/11/2020	20	20.75	Yes	0.0249 U	0.0199 U	0.0199 U	0.0199 U	0.0199 U	0.0249 U	0.0199 U
	358-B14-25	06/11/2020	25	26.5	Yes	0.0292 U	0.0233 U	0.0233 U	0.0233 U	0.0233 U	0.0292 U	0.0233 U
358-B15	358-B15-1	06/11/2020	1	2.5	Yes	0.0251 U	0.02 U	0.02 U	0.02 U	0.02 U	0.0251 U	0.02 U
	358-B15-5	06/11/2020	5	6.5	Yes	0.0342 U	0.0274 U	0.0274 U	0.0274 U	0.0274 U	0.0342 U	0.0274 U
	358-B15-10	06/11/2020	10	12.5	Yes	0.0217 U	0.0174 U	0.0174 U	0.0174 U	0.0174 U	0.0217 U	0.0174 U
	358-B15-20	06/11/2020	20	21.5	Yes	0.0168 U	0.0134 U	0.0134 U	0.0134 U	0.0134 U	0.0168 U	0.0134 U
	358-B15-25	06/11/2020	25	26.5	Yes	0.0275 U	0.022 U	<b>0.0380</b>	0.022 U	0.022 U	0.0275 U	0.022 U
358-PH1	358-PH1-1	06/09/2020	0	1	Removed	0.0275 U	0.022 U	0.022 U	0.022 U	0.022 U	0.0275 U	0.022 U
	358-PH1-2	06/09/2020	1	2	Removed	0.0244 U	0.0196 U	0.0196 U	0.0196 U	0.0196 U	0.0244 U	0.0196 U
	358-PH1-4	06/09/2020	3	4	Removed	0.0255 U	0.0204 U	<b>0.0233</b>	0.0204 U	0.0204 U	0.0255 U	0.0204 U
	358-PH1-7	06/09/2020	6	7	Removed	0.028 U	0.0224 U	0.0224 U	0.0224 U	0.0224 U	0.028 U	0.0224 U
	358-PH1-10	06/09/2020	9	10	Yes	0.0226 U	0.018 U	0.018 U	0.018 U	0.018 U	0.0226 U	0.018 U
358-PH2	358-PH2-1	06/10/2020	0	1	Removed	<b>0.0905</b>	0.0251 U	0.0251 U	0.0251 U	0.0251 U	0.0313 U	0.0251 U
	358-PH2-2	06/10/2020	1	2	Removed	0.0274 U	0.0219 U	0.0219 U	0.0219 U	0.0219 U	0.0274 U	0.0219 U
	358-PH2-4	06/10/2020	3	4	Removed	0.03 U	0.024 U	<b>0.136</b>	0.024 U	0.024 U	0.03 U	0.024 U
	358-PH2-7	06/10/2020	6	7	Removed	0.0374 U	0.0299 U	<b>0.551</b>	0.0299 U	0.0299 U	0.0374 U	0.0299 U
	358-PH2-10	06/10/2020	9	10	Yes	0.0318 U	0.0255 U	0.0255 U	0.0255 U	0.0255 U	0.0318 U	0.0255 U
358-PH3	358-PH3-1	06/09/2020	0	1	Removed	0.0305 U	0.0244 U	0.0244 U	0.0244 U	0.0244 U	0.0305 U	0.0244 U
	358-PH3-2	06/09/2020	1	2	Removed	0.0296 U	0.0237 U	0.0237 U	0.0237 U	0.0237 U	0.0296 U	0.0237 U
	358-PH3-4	06/09/2020	3	4	Removed	<b>0.269</b>	<b>0.124</b>	<b>5.71</b>	<b>0.153</b>	0.0224 U	<b>0.124</b>	0.0224 U
	358-PH3-7	06/09/2020	6	7	Removed	0.0366 U	0.0293 U	<b>10.7</b>	<b>0.219</b>	0.0293 U	<b>0.190</b>	0.0293 U
	358-PH3-10	06/09/2020	9	10	Yes	0.0261 U	0.0209 U	<b>0.0407</b>	0.0209 U	0.0209 U	0.0261 U	0.0209 U
358-PH4	358-PH4-1	06/09/2020	0	1	Removed	<b>0.0351</b>	0.0198 U	0.0198 U	0.0198 U	0.0198 U	0.0248 U	0.0198 U
	358-PH4-2	06/09/2020	1	2	Removed	<b>0.0758</b>	0.0219 U	0.0219 U	0.0219 U	0.0219 U	0.0273 U	0.0219 U
	358-PH4-4	06/09/2020	3	4	Removed	<b>0.0286</b>	0.0197 U	<b>0.0993</b>	0.0197 U	0.0197 U	0.0246 U	0.0197 U
	358-PH4-7	06/09/2020	6	7	Removed	0.0324 U	0.0259 U	0.0259 U	0.0259 U	0.0259 U	0.0324 U	0.0259 U
	358-PH4-10	06/09/2020	9	10	Yes	0.0287 U	0.023 U	0.023 U	0.023 U	0.023 U	0.0287 U	0.023 U
358-PH5	358-PH5-1	06/10/2020	0	1	Removed	<b>0.0471</b>	0.0238 U	0.0238 U	0.0238 U	0.0238 U	0.0297 U	0.0238 U
	358-PH5-2	06/10/2020	1	2	Removed	<b>0.0415</b>	0.0238 U	0.0238 U	0.0238 U	0.0238 U	0.0298 U	0.0238 U
	358-PH5-4	06/10/2020	3	4	Yes	0.0269 U	0.0215 U	0.0215 U	0.0215 U	0.0215 U	0.0269 U	0.0215 U
	358-PH5-7	06/10/2020	6	7	Yes	0.0495 U	0.0396 U	0.0396 U	0.0396 U	0.0396 U	0.0495 U	0.0396 U
	358-PH5-10	06/10/2020	9	10	Yes	0.0281 U	0.0225 U	0.0225 U	0.0225 U	0.0225 U	0.0281 U	0.0225 U
358-PH6	358-PH6-1	06/10/2020	0	1	Yes	0.0291 U	0.0233 U	0.0233 U	0.0233 U	0.0233 U	0.0291 U	0.0233 U
	358-PH6-2	06/10/2020	1	2	Yes	0.0251 U	0.0201 U	0.0201 U	0.0201 U	0.0201 U	0.0251 U	0.0201 U
	358-PH6-4	06/10/2020	3	4	Yes	0.0262 U	0.0209 U	0.0209 U	0.0209 U	0.0209 U	0.0262 U	0.0209 U
	358-PH6-7	06/10/2020	6	7	Yes	0.0293 U	0.0235 U	0.0235 U	0.0235 U	0.0235 U	0.0293 U	0.0235 U
	358-PH6-10	06/10/2020	9	10	Yes	0.0326 U	0.026 U	<b>0.0554</b>	0.026 U	0.026 U	0.0326 U	0.026 U

Location Identification <sup>1</sup>	Sample Identification	Sample Date	Start Depth <sup>2</sup> (feet bgs)	End Depth <sup>2</sup> (feet bgs)	Sample Representative of Soil Still Present as of 2022	VOCs <sup>3</sup> (mg/kg)						
						PCE Breakdown Products						1,1,2,2-Tetrachloroethane
						Tetrachloroethene (PCE)	Trichloroethene (TCE)	cis-1,2-Dichloroethene	trans-1,2-Dichloroethene	1,1-Dichloroethene	Vinyl Chloride	
Preliminary Cleanup Levels <sup>4</sup> (mg/kg)						0.05	0.03	0.0052	0.032	0.0025	0.001	0.001
358-PH7	358-PH7-1	06/10/2020	0	1	Removed	0.0348 U	0.0278 U	0.0278 U	0.0278 U	0.0278 U	0.0348 U	0.0278 U
	358-PH7-2	06/10/2020	1	2	Removed	0.0296 U	0.0237 U	0.0237 U	0.0237 U	0.0237 U	0.0296 U	0.0237 U
	358-PH7-4	06/10/2020	3	4	Removed	<b>0.683</b>	<b>0.161</b>	<b>0.0733</b>	0.0253 U	0.0253 U	0.0317 U	0.0253 U
	358-PH7-7	06/10/2020	6	7	Removed	<b>1.05</b>	<b>0.118</b>	<b>0.124</b>	0.0249 U	0.0249 U	0.0311 U	0.0249 U
	358-PH7-9	06/10/2020	9	10	Removed	<b>400</b>	<b>1.01</b>	<b>0.0747</b>	0.0236 U	0.0236 U	0.0295 U	0.0236 U
	358-PH7-12	06/10/2020	11	12	Yes	<b>1.95</b>	<b>0.0968</b>	<b>0.186</b>	0.0264 U	0.0264 U	0.0331 U	0.0264 U
	358-PH7-15	06/10/2020	14	15	Yes	<b>10.1</b>	<b>0.403</b>	<b>0.757</b>	0.0329 U	0.0329 U	0.0411 U	0.0329 U
358-PH8	358-PH8-5	06/10/2020	4	5	Removed	<b>15.3</b>	<b>16.9</b>	<b>8.91</b>	<b>0.305</b>	0.022 U	<b>0.0365</b>	0.022 U

**Notes:**

<sup>1</sup> Sample locations are shown on Figures 4, 5, and 7.

<sup>2</sup> Sample depths are presented in boring logs of previous reports (RZA AGRA 1994, GeoEngineers 2017, OSG 2020).

<sup>3</sup> Volatile organic compounds (VOCs) analyzed by Environmental Protection Agency (EPA) Method 8260.

<sup>4</sup> Preliminary cleanup levels calculated as shown in Appendix E.

<sup>5</sup> Identifier "Y Pay Mor" was added to the 1994 monitoring wells in 2017 to distinguish the older monitoring wells from other wells.

<sup>6</sup> Locations were identified as borings, completed with well screens within the vadose zone and connected to the soil vapor extraction system.

<sup>7</sup> Chemical analytical data shown are based on the raw laboratory report attached to the 1994 AGRA report. The data entered in AGRA's Table 2A of the 1994 report was reported in the wrong units and did not match the raw data in laboratory reports.

<sup>8</sup> Sample reported by laboratory as "S-36".

<sup>9</sup> Locations were identified as Confirmation Boring B-# in the 1994 report. The location identification was modified in this RI to CB-# to distinguish between the 1992 borings and the 1994 borings. Additionally the chemical analytical data package was not included in the 1994 AGRA obtained from Ecology files. The data reported was included in the text or Table 5 of the 1994 AGRA report. The chemical analytical results for the remainder of the chemicals of concern are not known.

NR = Not representative of current conditions

D = laboratory data packages indicate that surrogates were not recovered in these samples due to sample dilution required to quantify method analytes

bgs = below ground surface

E = concentration exceeded the calibration range of the instrument

mg/kg = milligrams per kilogram

U = analyte was not detected above the Practical Quantitation Limit (PQL)

-- = not analyzed

J = estimated result

> = greater than

PH - Supplemental test pit (pothole) investigation sample

**Bold** indicates analyte was detected above the PQL.

**Shading** indicates analyte was detected at a concentration greater than the preliminary cleanup level.

*Italicized* indicates analyte was not detected, but the PQL was greater than the preliminary cleanup level.

**Table 3**  
**Pre-2020 Remedial Excavation Groundwater Chemical Analytical Results**  
 Y Pay Mor Site Updated RI  
 Federal Way, Washington

Location Identification <sup>1</sup>	Sample Identification	Sample Date	Well Type	VOCs <sup>2</sup> (µg/L)					
				PCE and Breakdown Products					
				Tetrachloroethene (PCE)	Trichloroethene (TCE)	cis-1,2-Dichloroethene	trans-1,2-Dichloroethene	1,1-Dichloroethene	Vinyl Chloride
Groundwater Preliminary Cleanup Level <sup>3</sup> (µg/L)				5	5	70	100	7	0.20
Y Pay Mor-MW2	MW-2	09/23/1992	Permanent	5 U	5 U	5 U	5 U	5 U	10 U
	Water, MW-2 <sup>4</sup>	09/23/1992		2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
	Water, MW-2 <sup>4</sup>	06/13/1994		5.0 U	2.0 U	5.0 U	2.0 U	2.0 U	2.0 U
	MW2	11/17/1994		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Y Pay Mor-MW3	MW-3	10/28/1992	Permanent	<b>1 J</b>	<b>2 J</b>	<b>7</b>	5 U	5 U	10 U
	MW-3	11/13/1992		<b>2 J</b>	<b>3 J</b>	<b>9</b>	5 U	5 U	10 U
	Water, MW-3 <sup>4</sup>	11/13/1992		2.0 U	<b>2.3</b>	<b>6.6</b>	2.0 U	2.0 U	2.0 U
	Water, MW-3 <sup>4</sup>	06/13/1994		5.0 U	2.0 U	<b>5.4</b>	2.0 U	2.0 U	2.0 U
	MW3	11/17/1994		1.0 U	1.0 U	<b>2.2</b>	1.0 U	1.0 U	1.0 U
	MW-3 <sup>5</sup>	02/10/1997		ND	ND	<b>1.82</b>	-	-	-
	MW-3 <sup>5</sup>	07/23/1997		ND	ND	<b>3.63</b>	-	-	-
	YPAYMOR MW3-20171003	10/03/2017		0.20 U	0.20 U	<b>0.20</b>	0.20 U	0.20 U	0.20 U
YPM4-MW3-20200429	04/29/2020	1 U	0.5 U	1 U	1 U	1 U	0.2 U		
B-12	B12_H2O	10/28/1992	Temporary	<b>&gt;780 E</b>	<b>4 J</b>	<b>29</b>	5 U	5 U	10 U
	B12_H20DL	10/28/1992		<b>1,200</b>	250 U	250 U	250 U	250 U	500 U
	Water, B12 <sup>4</sup>	10/28/1992		<b>1,700</b>	200 U	200 U	200 U	200 U	200 U
FL358-MW1	FL358-MW1-20171006	10/06/2017	Permanent	<b>0.21</b>	<b>1.0</b>	<b>0.61</b>	0.20 U	0.20 U	0.20 U
	FL358-MW1-20200429	04/29/2020		1 U	0.5 U	1 U	1 U	1 U	0.20 U
FL358-MW2	FL358-MW2-20171006	10/06/2017	Permanent	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
	FL358-MW2-20200429	04/29/2020		1 U	0.50 U	1 U	1 U	1 U	0.20 U
FL358-MW3	DUP-20171009	10/09/2017	Permanent	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
	FL358-MW3-20171009	10/09/2017		0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
	FL358-MW3-20200429	04/29/2020		1 U	0.500 U	1 U	1 U	1 U	0.20 U
FL358-MW4	FL358-MW4-20171006	10/06/2017	Permanent	0.20 U	0.20 U	<b>0.34</b>	0.20 U	0.20 U	0.20 U
	FL358-MW4-20200429	04/29/2020		1 U	0.500 U	1 U	1 U	1 U	0.20 U
358-B3	358-B3-GW	05/08/2020	Temporary	<b>5.71</b>	<b>2.08</b>	<b>6.41</b>	1 U	1 U	0.20 U
358-B4	358-B4-GW	05/08/2020	Temporary	1 U	0.500 U	1 U	1 U	1 U	0.200 U
358-B5	358-B5-GW	05/08/2020	Temporary	<b>136</b>	<b>69.9</b>	<b>68.3</b>	1 U	1 U	<b>2.2</b>
358-B6	358-B6-GW	05/11/2020	Temporary	<b>6.08</b>	<b>6.24</b>	<b>17.8</b>	1 U	1 U	0.20 U
358-B7	358-B7-GW	05/11/2020	Temporary	1 U	<b>2.99</b>	<b>33.6</b>	1 U	1 U	<b>18.8</b>
358-B11	358-B11-GW	06/12/2020	Temporary	1 U	0.500 U	<b>3.37</b>	1 U	1 U	0.200 U
358-B15	358-B15-GW	06/12/2020	Temporary	1 U	<b>1.89</b>	<b>9.95</b>	1 U	1 U	0.200 U
358-B13	358-B13-GW	06/12/2020	Temporary	1 U	0.5 U	1 U	1 U	1 U	0.200 U
358-B14	358-B14-GW	06/12/2020	Temporary	1 U	0.5 U	1 U	1 U	1 U	0.200 U

**Notes:**

- <sup>1</sup> Sample locations are shown on Figure 5.
- <sup>2</sup> Volatile organic compounds (VOCs) analyzed by Environmental Protection Agency (EPA) Method 8260.
- <sup>3</sup> Preliminary cleanup levels calculated as shown in Appendix E.
- <sup>4</sup> Split sample analyzed by North Creek Analytical.
- <sup>5</sup> Chemical analytical data package not provided in the 1994 groundwater reports obtained from Ecology. The chemical laboratory practical quantitation limits are not known.
- > = greater than
- bgs = below ground surface
- J = estimated result      µg/L = micrograms per liter
- ND = Not detected      U = analyte was not detected above the Practical Quantitation Limit (PQL)
- = not analyzed
- Bold** indicates analyte was detected above the Practical Quantitation Limit (PQL).
- Shading indicates analyte was detected at a concentration greater than the preliminary cleanup level.

**Table 4**  
**2020 Remedial Excavation Confirmation Soil Samples Representative of Soil Remaining in Place**  
**Chemical Analytical Data**  
**Y Pay Mor Site Updated RI**  
**Federal Way, Washington**

Location ID <sup>1</sup>	Sample ID <sup>2</sup>	Sample Date	Confirmation Sample Type	Start Depth <sup>3</sup> (feet bgs)	End Depth <sup>3</sup> (feet bgs)	VOCs <sup>4</sup> (mg/kg)					
						Tetrachloroethene (PCE)	Trichloroethene (TCE)	cis-1,2-Dichloroethene	trans-1,2-Dichloroethene	1,1-Dichloroethene	Vinyl Chloride
<b>Soil Preliminary Cleanup Levels<sup>5</sup> (mg/kg)</b>						0.05	0.03	0.0052	0.032	0.0025	0.001
<b>Southern Remedial Excavation Area</b>											
358-PEX-10	358-PEX-10-1	07/20/2020	Sidewall	0	1	0.02 U	0.02 U	0.02 U	0.02 U	0.05 U	0.02 U
358-PEX-11	358-PEX-11-6	07/20/2020	Sidewall	5	6	0.02 U	0.02 U	0.02 U	0.02 U	0.05 U	0.02 U
358-PEX-13	358-PEX-13-6	07/20/2020	Sidewall	6	6	0.02 U	0.02 U	0.02 U	0.02 U	0.05 U	0.02 U
358-PEX-15	358-PEX-15-6	07/20/2020	Sidewall	6	6	0.02 U	0.02 U	<b>0.037</b>	0.02 U	0.05 U	0.02 U
358-PEX-29	358-PEX-29-8	07/21/2020	Base	8	8	0.02 U	0.02 U	0.02 U	0.02 U	0.05 U	0.02 U
358-PEX-30	358-PEX-30-8	07/21/2020	Base	8	8	<b>0.030</b>	0.02 U	0.02 U	0.02 U	0.05 U	0.02 U
358-PEX-41	358-PEX-41-1	07/21/2020	Sidewall	0	1	0.02 U	0.02 U	0.02 U	0.02 U	0.05 U	0.02 U
358-PEX-42	358-PEX-42-6	07/21/2020	Sidewall	6	7	0.02 U	0.02 U	0.02 U	0.02 U	0.05 U	0.02 U
358-PEX-45	358-PEX-45-1	07/22/2020	Sidewall	0	1	<b>0.042</b>	0.02 U	0.02 U	0.02 U	0.05 U	0.02 U
358-PEX-46	358-PEX-46-1	07/22/2020	Sidewall	0	1	<b>0.020</b>	0.02 U	0.02 U	0.02 U	0.05 U	0.02 U
358-PEX-54	358-PEX-54-10	07/23/2020	Base	10	10	0.02 U	0.02 U	0.02 U	0.02 U	0.05 U	0.02 U
358-PEX-55	358-PEX-55-10	07/23/2020	Base	10	10	0.02 U	0.02 U	0.02 U	0.02 U	0.05 U	0.02 U
358-PEX-56	358-PEX-56-6	07/23/2020	Sidewall	5	6	0.02 U	0.02 U	0.02 U	0.02 U	0.05 U	0.02 U
358-PEX-57	358-PEX-57-6	07/23/2020	Sidewall	5	6	0.02 U	0.02 U	<b>0.062</b>	0.02 U	0.05 U	0.02 U
358-PEX-58	358-PEX-58-6	07/23/2020	Base	6	6	0.02 U	0.02 U	0.02 U	0.02 U	0.05 U	0.02 U
358-PEX-59	358-PEX-59-10	07/23/2020	Base	10	10	0.02 U	0.02 U	0.02 U	0.02 U	0.05 U	0.02 U
358-PEX-60	358-PEX-60-8	07/23/2020	Base	8	8	0.02 U	0.02 U	0.02 U	0.02 U	0.05 U	0.02 U
358-PEX-61	358-PEX-61-6	07/23/2020	Sidewall	5	6	0.02 U	0.02 U	0.02 U	0.02 U	0.05 U	0.02 U
358-PEX-62	358-PEX-62-2	07/23/2020	Sidewall	1	2	0.02 U	0.02 U	0.02 U	0.02 U	0.05 U	0.02 U
358-PEX-63	358-PEX-63-2	07/23/2020	Sidewall	1	2	0.02 U	0.02 U	0.02 U	0.02 U	0.05 U	0.02 U
358-PEX-64	358-PEX-64-6	07/23/2020	Sidewall	5	6	0.02 U	0.02 U	0.02 U	0.02 U	0.05 U	0.02 U
358-PEX-66	358-PEX-66-2	07/23/2020	Sidewall	1	2	0.02 U	0.02 U	0.02 U	0.02 U	0.05 U	0.02 U
358-PEX-67	358-PEX-67-2	07/23/2020	Sidewall	1	2	0.02 U	0.02 U	0.02 U	0.02 U	0.05 U	0.02 U
358-PEX-68	358-PEX-68-9	07/23/2020	Base	9	9	0.02 U	0.02 U	0.02 U	0.02 U	0.05 U	0.02 U
358-PEX-70	358-PEX-70-6	07/23/2020	Sidewall	5	6	0.02 U	0.02 U	<b>0.062</b>	0.02 U	0.05 U	0.02 U
358-PEX-71	358-PEX-71-6	07/23/2020	Sidewall	5	6	0.02 U	0.02 U	<b>0.037</b>	0.02 U	0.05 U	0.02 U
358-PEX-76	358-PEX-76-6	07/24/2020	Sidewall	5	6	0.02 U	0.02 U	0.02 U	0.02 U	0.05 U	0.02 U
358-PEX-77	358-PEX-77-1	07/24/2020	Sidewall	0	1	0.02 U	0.02 U	0.02 U	0.02 U	0.05 U	0.02 U
358-PEX-80	358-PEX-80-6	07/27/2020	Sidewall	6	6	0.02 U	0.02 U	0.02 U	0.02 U	0.05 U	0.02 U
358-PEX-81	358-PEX-81-8	07/27/2020	Base	8	8	0.02 U	0.02 U	0.02 U	0.02 U	0.05 U	0.02 U
<b>Northern Remedial Excavation Area</b>											
358-PEX-6	358-PEX-6-4	07/16/2020	Sidewall	3	4	0.03 U	0.02 U	0.03 U	0.03 U	0.05 U	0.02 U
358-PEX-20	358-PEX-20-11	07/20/2020	Base	11	11	<b>9.33</b>	<b>0.029</b>	<b>0.049</b>	0.02 U	0.05 U	0.02 U
358-PEX-22	358-PEX-22-11	07/21/2020	Sidewall	10	11	<b>1.3</b>	<b>0.12</b>	<b>0.17</b>	0.02 U	0.05 U	0.02 U
358-PEX-32	358-PEX-32-10	07/21/2020	Base	10	10	<b>0.36</b>	0.02 U	0.02 U	0.02 U	0.05 U	0.02 U
358-PEX-33	358-PEX-33-7	07/21/2020	Sidewall	6	7	<b>0.035</b>	0.02 U	0.02 U	0.02 U	0.05 U	0.02 U
358-PEX-34	358-PEX-34-10	07/21/2020	Sidewall	9	10	<b>0.038</b>	0.02 U	0.02 U	0.02 U	0.05 U	0.02 U
358-PEX-35	358-PEX-35-10	07/21/2020	Sidewall	9	10	0.02 U	0.02 U	0.02 U	0.02 U	0.05 U	0.02 U
358-PEX-49	358-PEX-49-11	07/22/2020	Base	11	11	<b>0.14</b>	<b>0.024</b>	0.02 U	0.02 U	0.05 U	0.02 U
358-PEX-50	358-PEX-50-4	07/22/2020	Sidewall	4	5	0.02 U	0.02 U	0.02 U	0.02 U	0.05 U	0.02 U
358-PEX-51	358-PEX-51-10	07/22/2020	Sidewall	9	10	0.02 U	0.02 U	0.02 U	0.02 U	0.05 U	0.02 U
358-PEX-79	358-PEX-79-10	07/24/2020	Sidewall	9	10	0.02 U	0.02 U	0.02 U	0.02 U	0.05 U	0.02 U
358-PEX-83	358-PEX-83-10	07/28/2020	Sidewall	10	10	0.02 U	0.02 U	0.02 U	0.02 U	0.05 U	0.02 U
358-PEX-84	358-PEX-84-10	07/28/2020	Base	10	10	<b>0.028</b>	0.02 U	0.02 U	0.02 U	0.05 U	0.02 U
358-PEX-85	358-PEX-85-10	07/28/2020	Base	10	10	<b>1.1</b>	<b>0.099</b>	<b>0.042</b>	0.02 U	0.05 U	0.02 U
358-PEX-86	358-PEX-86-10	07/28/2020	Base	10	10	<b>0.39</b>	<b>0.037</b>	<b>0.034</b>	0.02 U	0.05 U	0.02 U
358-PEX-87	358-PEX-87-10	07/28/2020	Base	10	10	<b>0.33</b>	<b>0.028</b>	0.02 U	0.02 U	0.05 U	0.02 U
358-PEX-88	358-PEX-88-10	07/28/2020	Base	10	10	<b>0.029</b>	0.02 U	0.02 U	0.02 U	0.05 U	0.02 U
358-PEX-89	358-PEX-89-10	07/28/2020	Sidewall	10	10	0.02 U	0.02 U	0.02 U	0.02 U	0.05 U	0.02 U
358-PEX-91	358-PEX-91-11	07/31/2020	Base	11	11	<b>0.58</b>	<b>0.091</b>	<b>0.082</b>	0.02 U	0.05 U	0.02 U
358-PEX-92	358-PEX-92-10	07/31/2020	Sidewall	10	10	0.02 U	0.02 U	0.02 U	0.02 U	0.05 U	0.02 U
358-PEX-93	358-PEX-93-10	07/31/2020	Sidewall	10	10	0.02 U	0.02 U	0.02 U	0.02 U	0.05 U	0.02 U
358-PEX-95	358-PEX-95-10	07/31/2020	Base	10	10	<b>0.13</b>	0.02 U	0.02 U	0.02 U	0.05 U	0.02 U
358-PEX-96	358-PEX-96-10	07/31/2020	Sidewall	10	10	0.02 U	0.02 U	0.02 U	0.02 U	0.05 U	0.02 U
358-PEX-97	358-PEX-97-11	08/03/2020	Base	11	11	<b>0.12</b>	0.02 U	0.02 U	0.02 U	0.05 U	0.02 U
358-PEX-98	358-PEX-98-10	08/03/2020	Sidewall	10	10	<b>0.076</b>	0.02 U	0.02 U	0.02 U	0.05 U	0.02 U
358-PEX-99	358-PEX-99-10	08/03/2020	Sidewall	10	10	0.02 U	0.02 U	0.02 U	0.02 U	0.05 U	0.02 U
358-PEX-100	358-PEX-100-6	08/03/2020	Sidewall	6	6	0.02 U	0.02 U	0.02 U	0.02 U	0.05 U	0.02 U
358-PEX-101	358-PEX-101-11	08/04/2020	Base	11	11	<b>0.044</b>	<b>0.042</b>	0.02 U	0.02 U	0.05 U	0.02 U
358-PEX-102	358-PEX-102-10	08/04/2020	Sidewall	10	10	0.02 U	0.02 U	0.02 U	0.02 U	0.05 U	0.02 U
358-PEX-103	358-PEX-103-6	08/04/2020	Sidewall	6	6	0.02 U	0.02 U	0.02 U	0.02 U	0.05 U	0.02 U
358-PEX-104	358-PEX-104-7	08/05/2020	Sidewall	7	7	0.02 U	0.02 U	0.02 U	0.02 U	0.05 U	0.02 U
358-PH-105	358-PH-105-10	08/27/2020	Sidewall	9	10	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U
<b>Floor Drain/Sewer Removal Between Excavation Areas</b>											
SS-1-1.5	SS-1-1.5	08/14/2020	Sidewall	1.5	2	0.02 U	0.02 U	0.02 U	0.02 U	--	0.02 U
SS-2-1.5	SS-2-1.5	08/14/2020	Sidewall	1.5	2	0.02 U	0.02 U	0.02 U	0.02 U	--	0.02 U
SS-3-2.5	SS-3-2.5	08/14/2020	Base	2.5	2.5	0.02 U	0.02 U	0.02 U	0.02 U	--	0.02 U

**Notes:**

- <sup>1</sup> Sample locations are shown on Figure 7.
  - <sup>2</sup> Overexcavated soil samples are not shown and are listed in report OSG 2021.
  - <sup>3</sup> Surface elevation was approximately 435 feet around both excavation areas.
  - <sup>4</sup> Volatile organic compounds (VOCs) analyzed by Environmental Protection Agency (EPA) Method 8260.
  - <sup>5</sup> Preliminary cleanup levels calculated as shown in Appendix E.
- PEX - Post-excavation confirmation sample  
bgs = below ground surface  
mg/kg = milligrams per kilogram  
U = analyte was not detected above the Practical Quantitation Limit (PQL)  
-- = not analyzed  
**Bold** indicates analyte was detected above the PQL.  
 Shading indicates analyte was detected at a concentration greater than the preliminary cleanup level.  
*Italicized* indicates analyte was not detected, but the PQL was greater than the preliminary cleanup level.

**Table 5**  
**2022 Soil Chemical Analytical Data**  
Y Pay Mor Site Updated RI  
Federal Way, Washington

Location ID <sup>1</sup>	Sample ID	Sample Date	Start Depth (feet bgs)	End Depth (feet bgs)	VOCs <sup>2</sup> (mg/kg)					
					Tetrachloroethene (PCE)	Trichloroethene (TCE)	cis-1,2-Dichloroethene	trans-1,2-Dichloroethene	1,1-Dichloroethene	Vinyl Chloride
Soil Preliminary Cleanup Level <sup>3</sup> (mg/kg)					0.05	0.03	0.0052	0.032	0.0025	0.001
FL358-MW5A	FL358-MW5A-23-24	06/22/2022	23	24	<b>0.41</b>	<b>0.0091</b>	<b>0.0081</b>	0.00075 U	0.00075 U	0.00075 U
	FL358-MW5A-25-26	06/22/2022	25	26	<b>150</b>	<b>0.44</b>	<b>0.25</b>	<i>0.048 U</i>	<i>0.048 U</i>	<i>0.048 U</i>
FL358-MW5B	FL358-MW5-21.5-22.5	06/21/2022	21.5	22.5	<b>0.028</b>	<b>0.0022</b>	<b>0.0018</b>	0.00078 U	0.00078 U	0.00078 U
	FL358-MW5-24.5-25.5	06/21/2022	24.5	25.5	<b>1.1</b>	<b>0.038</b>	<b>0.032</b>	0.00076 U	0.00076 U	0.00076 U
	FL358-MW5-28-29	06/21/2022	28	29	<b>11</b>	<b>0.34</b>	<b>0.27</b>	<b>0.0014</b>	0.00089 U	<b>0.0024</b>
	FL358-MW5-33-34	06/21/2022	33	34	0.00091 U	0.00091 U	0.00091 U	0.00091 U	0.00091 U	0.00091 U
	FL358-MW5-36-37	06/21/2022	36	37	0.00084 U	0.00084 U	0.00084 U	0.00084 U	0.00084 U	0.00084 U
	FL358-MW5-37-38	06/21/2022	37	38	0.00079 U	0.00079 U	0.00079 U	0.00079 U	0.00079 U	0.00079 U
FL358-MW6	FL358-MW6-24-25	06/21/2022	24	25	<b>0.10</b>	<b>0.016</b>	<b>0.039</b>	0.00042 U	0.00042 U	<b>0.0025</b>
	DUP-220621 <sup>4</sup>	06/21/2022	24	25	<b>0.16</b>	<b>0.021</b>	<b>0.048</b>	0.00085 U	0.00085 U	<b>0.0029</b>
	FL358-MW6-29-30	06/21/2022	29	30	0.00076 U	0.00076 U	0.00076 U	0.00076 U	0.00076 U	0.00076 U
	FL358-MW6-34-35	06/21/2022	34	35	0.00089 U	0.00089 U	<b>0.0018</b>	0.00089 U	0.00089 U	0.00089 U
	FL358-MW6-36-37	06/21/2022	36	37	0.00082 U	0.00082 U	0.00082 U	0.00082 U	0.00082 U	0.00082 U
	FL358-MW6-37-38	06/21/2022	37	38	0.00095 U	0.00095 U	0.00095 U	0.00095 U	0.00095 U	0.00095 U
FL358-MW8	FL358-MW8-22-23	06/15/2022	22	23	<b>0.0018</b>	0.00086 U	0.00086 U	0.00086 U	0.00086 U	0.00086 U
	FL358-MW8-27-28	06/15/2022	27	28	0.00088 U	0.00088 U	0.00088 U	0.00088 U	0.00088 U	0.00088 U
	FL358-MW8-32-33	06/15/2022	32	33	0.00088 U	0.00088 U	0.00088 U	0.00088 U	0.00088 U	0.00088 U
	FL358-MW8-36-37	06/16/2022	36	37	0.00086 U	0.00086 U	0.00086 U	0.00086 U	0.00086 U	0.00086 U
	FL358-MW8-37-38	06/16/2022	37	38	0.00086 U	0.00086 U	0.00086 U	0.00086 U	0.00086 U	0.00086 U
FL358-MW9	FL358-MW9-22-23	06/16/2022	22	23	0.00078 U	0.00078 U	0.00078 U	0.00078 U	0.00078 U	0.00078 U
	FL358-MW9-27-28	06/16/2022	27	28	0.00084 U	0.00084 U	0.00084 U	0.00084 U	0.00084 U	0.00084 U
	DUP-220616 <sup>4</sup>	06/16/2022	27	28	0.00074 U	0.00074 U	0.00074 U	0.00074 U	0.00074 U	0.00074 U
	FL358-MW9-31-32	06/16/2022	31	32	0.00088 U	0.00088 U	<b>0.017</b>	0.00088 U	0.00088 U	0.00088 U
	FL358-MW9-37-38	06/16/2022	37	38	0.00082 U	0.00082 U	0.00082 U	0.00082 U	0.00082 U	0.00082 U
	FL358-MW9-40-41	06/16/2022	40	41	0.00088 U	0.00088 U	0.00088 U	0.00088 U	0.00088 U	0.00088 U
	FL358-MW9-41-42	06/16/2022	41	42	0.00082 U	0.00082 U	0.00082 U	0.00082 U	0.00082 U	0.00082 U
FL358-MW14	FL358-MW14-23-24	06/15/2022	23	24	0.00092 U	0.00092 U	0.00092 U	0.00092 U	0.00092 U	0.00092 U
	FL358-MW14-28-29	06/15/2022	28	29	0.00076 U	0.00076 U	0.00076 U	0.00076 U	0.00076 U	0.00076 U
	FL358-MW14-33-34	06/15/2022	33	34	0.00074 U	0.00074 U	0.00074 U	0.00074 U	0.00074 U	0.00074 U
	FL358-MW14-37-38	06/15/2022	37	38	0.00098 U	0.00098 U	0.00098 U	0.00098 U	0.00098 U	0.00098 U
	FL358-MW14-38.5-39.5	06/15/2022	38.5	39.5	0.00086 U	0.00086 U	0.00086 U	0.00086 U	0.00086 U	0.00086 U

**Notes:**

- <sup>1</sup> Sample locations are shown on Figure 8.
  - <sup>2</sup> Volatile organic compounds (VOCs) analyzed by Environmental Protection Agency (EPA) Method 8260.
  - <sup>3</sup> Preliminary cleanup levels calculated as shown in Appendix E.
  - <sup>4</sup> The field duplicate (Dup-220621) represents parent sample FL358-MW6-24-25. The field duplicate (Dup-220616) represents parent sample FL358-MW9-27-28. Note the text in the 2022 Shannon and Wilson report has duplicate samples swapped, but tables and chemical analytical laboratory packages are correct.
- bgs = below ground surface  
mg/kg = milligrams per kilogram  
U = analyte was not detected above the Practical Quantitation Limit (PQL)  
**Bold** indicates analyte was detected above the Practical Quantitation Limit (PQL).  
 Shading indicates analyte was detected at a concentration greater than the preliminary cleanup level.  
*Italicized* indicates analyte was not detected, but the PQL was greater than the preliminary cleanup level.

**Table 6**  
**2022 Soil Physiochemical and Grain Size Analytical Data**  
 Y Pay Mor Site Updated RI  
 Federal Way, Washington

Location ID <sup>1</sup>	Sample ID	Sample Date	Start Depth (feet bgs)	End Depth (feet bgs)	Physiochemical Tests				Grain Size Distribution (percent retained) <sup>6</sup>				Soil Identification/Type <sup>7</sup>
					pH <sup>2</sup>	Moisture Content <sup>3</sup> (%)	Bulk Density <sup>4</sup> (g/cm <sup>3</sup> )	Total Organic Carbon <sup>5</sup> (%)	% Gravel	% Sand	% Silt	% Clay	
FL358-MW5B	FL358-MW5B-26-27	06/21/2022	26	27	7.9	10.8	1.835	0.09	27.4	28.7	27.1	16.8	Silty Sand with Gravel (SM)
FL358-MW5B	FL358-MW5B-34-35	06/21/2022	34	35	7.3	18.4	1.613	0.17	11.5	34.7	44.0	10.0	Sandy Silt (ML)
FL358-MW5B	FL358-MW5B-36-37	06/21/2022	36	37	7.8	5.6	1.576	0.05 U	34.6	33.7	22.7	9.10	Silty Gravel with Sand (GM)
FL358-MW6	FL358-MW6-18-19	06/21/2022	18	19	7.7	9.1	1.736	0.13	18.1	61.9	10.7	9.40	Silty Sand with Gravel (SM)
FL358-MW6	FL358-MW6-28-29	06/21/2022	28	29	7.7	7.8	1.942	0.09	40.6	32.3	18.8	8.40	Silty Gravel with Sand (GM)
FL358-MW6	FL358-MW6-37-38	06/21/2022	37	38	7.7	12.0	1.294	0.30	3.10	12.1	57.7	27.1	Silt with Sand (ML)

**Notes:**

<sup>1</sup> Sample locations are shown on Figure 8.

<sup>2</sup> pH analyzed by SW-846 9045D.

<sup>3</sup> Total solids analyzed by SM2540 G. Moisture content calculated based on total solid results.

<sup>4</sup> Bulk density by ASTM D2487.

<sup>5</sup> Total organic carbon analyzed by SW 846 9060.

<sup>6</sup> Grain size distribution analyzed by ASTM D422.

<sup>7</sup> Soil types are presented in SWI 2022 and using definitions based on ASTM D2488.

bgs = below ground surface

g/cm<sup>3</sup> = gram per cubic centimeter

**Table 7**  
**2022 Groundwater Parameters and Chemical Analytical Data**  
 Y Pay Mor Site Updated RI  
 Federal Way, Washington

Location ID <sup>1</sup>	Sample ID	Sample Date	VOCs <sup>2</sup> (µg/L)					Dissolved Gases <sup>3</sup> (µg/L)			Conventional <sup>4</sup> (mg/L)						Dehalococoides <sup>7</sup> (cells/mL)	Groundwater Parameters <sup>5</sup>								
			Tetrachloroethene (PCE)	Trichloroethene (TCE)	cis-1,2-Dichloroethene	trans-1,2-Dichloroethene	1,1-Dichloroethene	Vinyl Chloride	Ethene	Methane	Acetylene	Total Organic Carbon	Ammonia (Total as N)	Nitrate	Nitrite	Total Iron		Ferrous Iron <sup>6</sup>	Biological Oxygen Demand	ORP (mV)	pH	DO (mg/L)	Temperature (°C)			
	Groundwater Preliminary Cleanup Level <sup>8</sup> (µg/L)		5	5	70	100	7	0.20	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Protection of Indoor Air/Vapor Intrusion Commercial Use <sup>9</sup> (µg/L)		120	12	1600	650	1100	1.6	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Protection of Indoor Air/Vapor Intrusion Residential Use <sup>9</sup> (µg/L)		21	1.4	180	77	130	0.33	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Conditions Indicative of Dechlorination Occurring <sup>10</sup>		N/A	Detected	>80% of total DCEs	Detected	Detected	Detected	>10	>500	Detected	>20 mg/L	Detected and Increasing	<1.0 mg/L	Detected and Increasing	>1.0 mg/L	>1.0 mg/L	Detected	>1,000	<-50 mV (possible) <-100 mV (likely)	5 < pH < 9	<0.5 mg/L	>20 C° = faster dechlorination			
FL358-MW5A	FL358-MW5A-220630	06/30/2022	91	50	37	1.0 U	1.0 U	2.3	0.79	1,400	9.5	8.2	0.10	0.050 U	0.020 U	0.56	0.690	2.5	--	-19.2	7.43	0.20	13.80			
	FL358-MW5A-082522	08/05/2022	24	27	60	0.50	0.40 U	2.0	0.29 U	1,400	1.2 U	7.7	0.090	0.056	0.020 U	1.30	1.66	2.0 U	--	15.3	6.12	0.06	15.51			
	FL358-MW5A-113022	11/30/2022	21	28	55	0.49	0.40 U	4.0	--	--	--	--	--	--	--	--	--	--	--	8.1	6.77	0.12	14.48			
	FL358-MW5A-230315	03/15/2023	48	93	160	1.3	0.80 U	14	2.8	610	1.2 U	7.3	0.050 U	0.64	0.020 U	2,100	--	2.2	2,580	-12.7	6.55	0.22	12.00			
FL358-MW5B	FL358-MW5B-220630	06/30/2022	3.4	0.83	0.20 U	0.20 U	0.20 U	0.20 U	0.29 U	100	1.2 U	4.9	0.079	0.050 U	0.020 U	0.12	0.100 U	2.0 U	--	-36.1	7.59	0.18	14.20			
	FL358-MW5B-082422	08/24/2022	0.26	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.29 U	110	1.2 U	5.1	0.050 U	0.050 U	0.020 U	0.19	0.176	2.0 U	--	-3.2	6.04	0.08	14.10			
	FL358-MW5B-112822	11/28/2022	0.20	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	--	--	--	--	--	--	--	--	--	--	--	16.3	6.81	0.13	13.68			
	FL358-MW5B-230315	03/15/2023	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.29 U	45	1.2 U	4.0	0.050 U	0.050 U	0.020 U	220	--	3.2	18.6	33.1	6.58	0.28	13.10			
FL358-MW6	FL358-MW6-220630	06/30/2022	38	100	86	1.0 U	1.0 U	1.5	0.29 U	2,000 JL	8.7	8.3	0.10	0.050 U	0.020 U	0.43	0.588	3.0	--	7.7	7.30	0.30	13.77			
	FL358-MW6-082522	08/05/2022	53	130	110	1.1	0.80 U	1.8	0.29 U	2,100	1.2 U	7.9	0.16	0.062	0.020 U	0.68	0.710	2.5	--	61.7	5.98	0.09	15.21			
	FL358-MW6-113022	11/30/2022	32	100	71	0.80 U	0.80 U	1.0	--	--	--	--	--	--	--	--	--	--	--	27.7	6.77	0.11	13.89			
	FL358-MW6-230315	03/15/2023	39	150	96	0.88	0.80 U	1.4	0.29 U	1,400	1.2 U	7.0	0.15	0.050 U	0.020 U	730	--	7.0	99.8	29.0	6.48	4.10	12.50			
	GW-DUP-230315	03/15/2023	37	140	91	0.85	0.80 U	1.4	0.29 U	1,500	1.2 U	7.1	0.067	0.050 U	0.020 U	650	--	6.2	89.8	29.0	6.48	4.10	12.50			
FL358-MW7	FL358-MW7-220629	06/29/2022	0.33 B	0.20 U	6.0	0.20 U	0.20 U	3.7	0.29 U	4,100 JL	1.2 U	20	2.9	0.064	0.020 U	36	42.8	2.0 U	--	-46.0	7.56	0.63	13.49			
	FL358-MW7-082422	08/24/2022	0.28	0.20 U	7.1	0.20 U	0.20 U	4.6	0.29 U	3,100	1.2 U	20	3.9	0.63	0.020 U	43	48.2	26	--	-46.9	6.29	0.08	15.70			
	FL358-MW7-112922	11/29/2022	0.20 U	0.20 U	5.3	0.20 U	0.20 U	4.9	--	--	--	--	--	--	--	--	--	--	--	-30.5	6.70	0.21	14.83			
	FL358-MW7-230315	03/15/2023	0.35	0.20 U	4.7	0.20 U	0.20 U	4.0	0.29 U	4,500	1.2 U	18	2.2	0.050 U	0.020 U	35,000	--	6.0	265	-115.1	6.46	4.23	12.10			
FL358-MW8	FL358-MW8-220628	06/28/2022	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.29 U	170	1.2 U	4.4	0.050 U	0.050 U	0.020 U	0.33	0.457	2.0 U	--	61.3	7.43	0.30	13.20			
	FL358-MW8-082322	08/23/2022	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.29 U	180	1.2 U	4.6	0.050 U	0.050 U	0.020 U	0.26	0.336	2.0 U	--	-65.2	5.90	0.14	14.01			
	FL358-MW8-112822	11/28/2022	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	--	--	--	--	--	--	--	--	--	--	--	70.2	6.84	0.10	13.47			
	FL358-MW8-230315	03/15/2023	0.20 U	0.25	0.20 U	0.20 U	0.20 U	0.20 U	0.29 U	56	1.2 U	4.0	0.050 U	0.050 U	0.020 U	1,400	--	2.0 U	4.60	-5.6	6.60	0.09	13.00			
FL358-MW9	FL358-MW9-220628	06/28/2022	0.87 B	2.6 J	2.6 J	0.20 U	0.20 U	0.20 U	0.29 U	6,100 JL	1.2 U	13	1.3	0.050 U	0.020 U	59	64.9	5.4 JL	--	-63.5	7.53	0.29	13.56			
	FL358-MW100-220628 <sup>9</sup>	06/28/2022	0.58 B	1.8 J	1.8 J	0.20 U	0.20 U	0.20 U	0.29 U	5,300 JL	1.2 U	13	1.4	0.050 U	0.020 U	57	69.8	2.9 JL	--	-	-	-	-			
	FL358-MW9-082322	08/23/2022	1.7	2.9	2.0	0.20 U	0.20 U	0.20 U	0.29 U	6,400	1.2 U	14	1.4	0.63	0.020 U	54	62.0	23	--	-53.4	5.92	0.07	14.57			
	FL358-MW101 <sup>9</sup>	08/23/2022	1.6	2.8	2.0	0.20 U	0.20 U	0.20 U	0.29 U	6,400	1.2 U	14	1.5	0.48	0.020 U	53	69.4	22	--	-	-	-	-			
	FL358-MW9-112922	11/29/2022	0.20 U	0.20 U	1.8	0.20 U	0.20 U	0.20 U	--	--	--	--	--	--	--	--	--	--	--	2.7	6.62	0.12	13.71			
FL358-MW10	FL358-MW9-230315	03/15/2023	0.20 U	0.23	1.8	0.20 U	0.20 U	0.20 U	0.29 U	7,600	1.2 U	14	1.4	0.050 U	0.020 U	52,000	--	13	226	-94.1	6.36	1.00	12.50			
	FL358-MW10-220627	06/27/2022	0.20 U	0.36	7.6	0.20 U	0.20 U	0.22	0.29 U	2,700	1.2 U	10	0.57	0.050 U	0.020 U	24	29.3	4.7	--	13.4	6.13	0.28	14.90			
	FL358-MW10-082322	08/23/2022	0.20 U	0.36	9.0	0.20 U	0.20 U	0.36	0.29 U	5,000	1.2 U	11	0.61	0.45	0.020 U	23	32.1	22	--	-12.9	5.85	0.05	15.67			
	FL358-MW10-112922	11/29/2022	0.20 U	0.28	6.2	0.20 U	0.20 U	0.31	--	--	--	--	--	--	--	--	--	--	--	-5.3	6.61	0.08	14.35			
	FL358-MW101-112922 <sup>9</sup>	11/29/2022	0.20 U	0.29	6.2	0.20 U	0.20 U	0.33	--	--	--	--	--	--	--	--	--	--	--	-	-	-	-			
FL358-MW11	FL358-MW10-230314	03/14/2023	0.20 U	0.25	6.4	0.20 U	0.20 U	0.52	0.29 U	3,500	1.2 U	11	0.54	0.050 U	0.020 U	24,000	--	3.9	54.8	-92.7	6.32	2.49	13.50			
	FL358-MW11-220627	06/27/2022	0.20 U	0.20 U	7.7	0.20 U	0.20 U	4.8	0.29 U	2,900	1.2 U	24	2.8	0.14 J	0.020 U	46	55.5	9.4	--	5.6	6.11	0.26	14.90			
	FL358-MW11-082422	08/24/2022	0.20 U	0.20 U	8.8	0.20 U	0.20 U	5.5	0.29 U	2,700	1.2 U	23	2.8	0.70	0.035	42	46.9	33	--	-46.7	5.87	0.05	14.97			
	FL358-MW11-113022	11/30/2022	0.20 U	0.20 U	6.1	0.20 U	0.20 U	4.1	--	--	--	--	--	--	--	--	--	--	--	-29.9	6.58	0.05	14.91			
FL358-MW12	FL358-MW11-230315	03/15/2023	0.20 U	0.20 U	6.1	0.20 U	0.20 U	5.0	0.29 U	3,700	1.2 U	22	2.8	0.074	0.02 U	36,000	--	9.7	124	-91.2	6.39	0.43	12.30			
	FL358-MW12-220629	06/29/2022	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.29 U	3,100	1.2 U	28	4.5	0.082	0.020 U	70	76.0	7.8	--	-61.4	7.53	0.37	13.72			
	FL358-MW12-082322	08/23/2022	0.20 U	0.20 U	0.32	0.20 U	0.20 U	0.20 U	0.29 U	5,500	1.2 U	28	4.3	0.41	0.020 U	69	76.4	21	--	-75.0	5.87	0.11	14.37			
	FL358-MW12-112822	11/28/2022	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	--	--	--	--	--	--	--	--	--	--	--	-18.2	6.60	0.44	12.79			
FL358-MW13	FL358-MW12-230315	03/15/2023	0.20 U	0.20 U	0.29	0.20 U	0.20 U	0.20 U	0.29 U	5,600	1.2 U	32	4.2	0.14	0.020 U	75,000	--	14	304	-110.2	6.46	0.27	12.60			
	FL358-MW13-220628	06/28/2022	8.0	2.9	4.3	0.20 U	0.20 U	0.20 U	0.29 U	41	1.2 U	7.5	0.050 U	0.050 U	0.020 U	2.2	0.985	2.0 U	--	100.1	7.21	0.95	13.90			
	FL358-MW13-082522	08/05/2022	5.1	2.5	4.2	0.20 U	0.20 U	0.20 U	0.29 U	140	1.2 U	7.4	0.064	0.11	0.020 U	3.7	3.17	2.0 U	--	35.0	5.79	1.43				

Location ID <sup>1</sup>	Sample ID	Sample Date	VOCs <sup>2</sup> (µg/L)					Dissolved Gases <sup>3</sup> (µg/L)			Conventionals <sup>4</sup> (mg/L)						Dehalococoides <sup>7</sup> (cells/mL)	Groundwater Parameters <sup>5</sup>					
			Tetrachloroethene (PCE)	Trichloroethene (TCE)	cis-1,2-Dichloroethene	trans-1,2-Dichloroethene	1,1-Dichloroethene	Vinyl Chloride	Ethene	Methane	Acetylene	Total Organic Carbon	Ammonia (Total as N)	Nitrate	Nitrite	Total Iron		Ferrous Iron <sup>6</sup>	Biological Oxygen Demand	ORP (mV)	pH	DO (mg/L)	Temperature (°C)
Groundwater Preliminary Cleanup Level <sup>8</sup> (µg/L)			5	5	70	100	7	0.20	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Protection of Indoor Air/Vapor Intrusion Commercial Use <sup>9</sup> (µg/L)			120	12	1600	650	1100	1.6	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Protection of Indoor Air/Vapor Intrusion Residential Use <sup>9</sup> (µg/L)			21	1.4	180	77	130	0.33	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
FL358-MW14	FL358-MW14-220629	06/29/2022	0.20 U	<b>0.35</b>	<b>16</b>	0.20 U	0.20 U	<b>2.5</b>	0.29 U	<b>510</b>	1.2 U	<b>10</b>	<b>0.060</b>	0.050 U	0.020 U	<b>7.8</b>	<b>12.0</b>	<b>3.0</b>	--	-0.6	7.44	0.25	14.59
	FL358-MW14-082422	08/24/2022	0.20 U	0.20 U	<b>4.9</b>	0.20 U	0.20 U	<b>1.1</b>	0.29 U	<b>910</b>	1.2 U	<b>11</b>	<b>0.12</b>	<b>0.29</b>	0.020 U	<b>10</b>	<b>13.1</b>	<b>2.2</b>	--	11.0	5.84	0.23	16.13
	FL358-MW14-112922	11/29/2022	0.20 U	0.20 U	<b>7.1</b>	0.20 U	0.20 U	<b>1.5</b>	--	--	--	--	--	--	--	--	--	--	--	14.2	6.53	0.09	14.19
	FL358-MW14-230314	03/14/2023	0.20 U	<b>0.20</b>	<b>9.7</b>	0.20 U	0.20 U	<b>2.3</b>	0.29 U	<b>430</b>	1.2 U	<b>9.8</b>	<b>0.28</b>	<b>0.43</b>	0.020 U	<b>9,500</b>	--	<b>3.0</b>	0.500 U	-68.8	6.27	1.44	13.60

Notes:

- <sup>1</sup> Sample locations are shown on Figure 8.
- <sup>2</sup> Volatile organic compounds (VOCs) analyzed by Environmental Protection Agency (EPA) Method 8260.
- <sup>3</sup> Dissolved gases analyzed by Method RSK 175.
- <sup>4</sup> Total organic carbon analyzed by EPA method SM5310B, Ammonia analyzed by Method SM4500-NH<sub>3</sub>D, Nitrate analyzed by EPA Method 353.2, Nitrite analyzed by EPA Method 353.2, Total Iron analyzed by EPA Method 6010D, Ferrous Iron analyzed by Method SM3500-Fe B, and Biological Oxygen Demand analyzed by Method SM5210B.
- <sup>5</sup> Stabilized groundwater parameters are reported that represent conditions during the time of sample collection.
- <sup>6</sup> March 2023 ferrous iron data is not presented due equipment calibration limitations.
- <sup>7</sup> Dehalococoides was analyzed using the CENSUS® method at Microbial Insights Laboratory in Knoxville, Tennessee.
- <sup>8</sup> Preliminary cleanup levels calculated as shown in Appendix E.
- <sup>9</sup> Groundwater screening level protective of indoor air.
- <sup>10</sup> Based on "Technical Protocol for Evaluating Natural Attenuation of Chlorinated Solvents in Groundwater" (EPA, September 1998)

B = Result is shown as Estimated because laboratory quality control testing did not meet standards. The concentration presented is biased high due to potential cross contamination indicated by low-level PCE detections in the rinsate samples. Flag applied by Shannon & Wilson.

µmhos/cm = micromhos per centimeter

C = Celsius

g/L = grams per liter

J = Estimated result due to quality control failures. Flag applied by Shannon & Wilson.

JL = Estimated result, biased low, due to quality control failures. Flag applied by Shannon & Wilson.

mg/L = milligrams per liter

mV = millivolts

N = Nitrogen

N/A = not applicable

NTU = Nephelometric Turbidity Unit

U = analyte was not detected above the Practical Quantitation Limit (PQL)

ug/L = micrograms per liter

-- = not analyzed

Bold indicates analyte was detected above the Practical Quantitation Limit (PQL).

Shading indicates analyte was detected at a concentration greater than the preliminary cleanup level.

Shading indicates geochemical parameters are favorable for dechlorination.

**Table 8**  
**2022 Groundwater Elevations**  
Y Pay Mor Site Updated RI  
Federal Way, Washington

Monitoring Well <sup>1</sup> (TOC Elevation)	Date Measured	Screened Interval (feet below TOC)	Depth to Groundwater (feet below TOC)	Groundwater Elevation <sup>2</sup> (feet)
FL358-MW5A (435.70)	06/27/22	21 - 26	10.14	425.56
	07/20/22		11.25	424.45
	10/19/22		13.69	422.01
	11/28/22		11.95	423.75
	03/14/23		10.30	425.40
FL358-MW5B (435.66)	06/27/22	32 - 37	9.34	426.32
	07/20/22		10.42	425.24
	10/19/22		12.60	423.06
	11/28/22		10.77	424.89
	03/14/23		9.36	426.30
FL358-MW6 (435.64)	06/27/22	17 - 37	11.59	424.05
	07/20/22		12.70	422.94
	10/19/22		15.25	420.39
	11/28/22		13.72	421.92
	03/14/23		11.63	424.01
FL358-MW7 (433.50)	06/27/22	14 - 34	11.75	421.75
	10/19/22		15.34	418.16
	11/28/22		14.09	419.41
	03/14/23		11.60	421.90
FL358-MW8 (435.87)	06/27/22	18 - 38	9.68	426.19
	10/19/22		12.99	422.88
	11/28/22		11.17	424.70
	03/14/23		9.70	426.17
FL358-MW9 (435.50)	06/27/22	21 - 41	12.52	422.98
	10/19/22		15.68	419.82
	11/28/22		14.14	421.36
	03/14/23		12.05	423.45
FL358-MW10 (433.97)	06/27/22	18 - 38	11.97	422.00
	10/19/22		15.31	418.66
	11/28/22		14.02	419.95
	03/14/23		11.86	422.11
FL358-MW11 (432.78)	06/27/22	15 - 35	11.89	420.89
	10/19/22		15.25	417.53
	11/28/22		14.07	418.71
	03/14/23		11.68	421.10
FL358-MW12 (435.11)	06/27/22	18 - 38	12.21	422.90
	10/19/22		16.04	419.07
	11/28/22		13.08	422.03
	03/14/23		12.51	422.60
FL358-MW13 (435.68)	06/27/22	21 - 41	13.40	422.28
	10/19/22		16.62	419.06
	11/28/22		15.17	420.51
	03/14/23		14.85	420.83
FL358-MW14 (434.32)	06/27/22	19 - 39	12.05	422.27
	07/20/22		13.22	421.10
	10/19/22		15.59	418.73
	11/28/22		14.43	419.89
	03/14/23		12.81	421.51

**Notes:**

<sup>1</sup> Approximate monitoring well locations are shown on Figures 4, 5, 7, and 8.

<sup>2</sup> Groundwater elevation measurements are relative to NAVD88. Top of casing elevations were surveyed by Kiewit in June 2022.

Groundwater contours are shown on Figures 11 and 12.

TOC = top of casing

**Table 9**  
**Remaining In Place as of 2022 Soil Samples Chemical Analytical Data**  
 Y Pay Mor Site Updated RI  
 Federal Way, Washington

Location ID <sup>1</sup>	Sample ID	Sample Date	Start Depth (feet bgs)	End Depth (feet bgs)	Ground Surface Elevation at Time of Drilling <sup>3</sup> (feet)	Sample Start Elevation <sup>4</sup> (feet)	Sample End Elevation <sup>4</sup> (feet)	Approximate Current Ground Surface <sup>4,5</sup> (feet)	Approximate Sample Depth Below Current Ground Surface <sup>6</sup> (feet)	VOCs <sup>2</sup> (mg/kg)					
										PCE Breakdown Products					
										Tetrachloroethene (PCE)	Trichloroethene (TCE)	cis-1,2- Dichloroethene	trans-1,2- Dichloroethene	1,1- Dichloroethene	Vinyl Chloride
Soil Preliminary Cleanup Levels <sup>7</sup> (mg/kg)										0.05	0.03	0.0052	0.032	0.0025	0.001
<b>Preliminary Remedial Investigation (RZA Agra, Inc. 1992)</b>															
YPAYMOR-MW2	B5-S4	8/31/1992	10	10	425.59	415.59	415.59	435.5	20	6 U	6 U	6 U	6 U	-	12 U
	B5-S8	8/31/1992	20	20	425.59	405.59	405.59	435.5	30	6 U	6 U	6 U	6 U	-	11 U
YPAYMOR-MW3	B11_S-3	10/27/1992	7.5	7.5	425.6	418.1	418.1	435.5	17	6 U	6 U	6 U	6 U	-	12 U
	B11_S-5	10/27/1992	12.5	12.5	425.6	413.1	413.1	435.5	22	6 U	6 U	6 U	6 U	-	11 U
	B11_S-6	10/27/1992	15	15	425.6	410.6	410.6	435.5	25	6 U	6 U	6 U	6 U	-	11 U
<b>Phase II ESA (GeoEngineers 2017)</b>															
FL358-B1	FL358-B1-13-14	10/5/2017	13	14	423.5	410.5	409.5	435.5	25	0.066	0.0022	0.0043	0.00080 U	0.00080 U	0.00080 U
FL358-B3	FL358-B3-5-6	10/5/2017	5	6	425.6	420.6	419.6	435.5	15	0.00098 U	0.00098 U	0.00098 U	0.00098 U	0.00098 U	0.00098 U
	FL358-B3-7-8	10/5/2017	7	8	425.6	418.6	417.6	435.5	17	0.0012 U	0.0012 U	0.0012 U	0.0012 U	0.0012 U	0.0012 U
	FL358-B3-12-13	10/5/2017	12	13	425.6	413.6	412.6	435.5	22	0.0015 U	0.0015 U	0.0015 U	0.0015 U	0.0015 U	0.0019 U
FL358-MW1	FL358-MW1-1.5-2.5	10/2/2017	1.5	2.5	425.59	424.09	423.09	435.5	11	0.00098 U	0.00098 U	0.00098 U	0.00098 U	0.00098 U	0.00098 U
	FL358-MW1-5-6	10/2/2017	5	6	425.59	420.59	419.59	435.5	15	0.00091 U	0.00091 U	0.00091 U	0.00091 U	0.00091 U	0.00091 U
	FL358-MW1-12-13	10/2/2017	12	13	425.59	413.59	412.59	435.5	22	0.00099 U	0.00099 U	0.00099 U	0.00099 U	0.00099 U	0.00099 U
	FL358-MW1-19-20	10/2/2017	19	20	425.59	406.59	405.59	435.5	29	0.0049	0.0033	0.0016	0.00084 U	0.00084 U	0.00084 U
FL358-MW2	FL358-MW2-1.5-2.5	10/2/2017	1.5	2.5	425.37	423.87	422.87	435.5	12	0.0011 U	0.0011 U	0.0011 U	0.0011 U	0.0011 U	0.0011 U
	FL358-MW2-9-10	10/2/2017	9	10	425.37	416.37	415.37	435.5	19	0.00087 U	0.00087 U	0.00087 U	0.00087 U	0.00087 U	0.00087 U
	FL358-MW2-13-14	10/2/2017	13	14	425.37	412.37	411.37	435.5	23	0.00088 U	0.00088 U	0.00088 U	0.00088 U	0.00088 U	0.00088 U
FL358-MW3	FL358-MW3-4-5	10/3/2017	4	5	424.34	420.34	419.34	435.5	15	0.00095 U	0.00095 U	0.00095 U	0.00095 U	0.00095 U	0.00095 U
	FL358-MW3-7-8	10/3/2017	7	8	424.34	417.34	416.34	435.5	18	0.00089 U	0.00089 U	0.00089 U	0.00089 U	0.00089 U	0.00089 U
	FL358-MW3-11-12	10/3/2017	11	12	424.34	413.34	412.34	435.5	22	0.00078 U	0.00078 U	0.00078 U	0.00078 U	0.00078 U	0.00078 U
FL358-MW4	FL358-MW4-6.5-7.5	10/3/2017	6.5	7.5	424.8	418.3	417.3	435.5	17	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U
	FL358-MW4-8.5-9.5	10/3/2017	8.5	9.5	424.8	416.3	415.3	435.5	19	0.00094 U	0.00094 U	0.00094 U	0.00094 U	0.00094 U	0.0012 U
<b>Interim Action Borings and Potholes (OSG 2021)</b>															
358-B1	358-B1-10	5/7/2020	10	11	424	416	415	435.5	20	0.028 U	0.0224 U	0.0224 U	0.0224 U	0.0224 U	0.028 U
	358-B1-20	5/7/2020	20	20.5	424	413	412	435.5	23	0.0224 U	0.0179 U	0.0179 U	0.0179 U	0.0179 U	0.0224 U
358-B2	358-B2-12.5	5/7/2020	12	13	427	415	413	435.5	21	0.0317 U	0.0253 U	0.0253 U	0.0253 U	0.0253 U	0.0317 U
	358-B2-25	5/7/2020	25	25.5	427	402	400.5	435.5	34	0.0297 U	0.0238 U	0.0238 U	0.0238 U	0.0238 U	0.0297 U
358-B3	358-B3-10	5/7/2020	10	11	423	414	413	435.5	22	0.0254 U	0.0204 U	0.0204 U	0.0204 U	0.0204 U	0.0254 U
	358-B3-12.5	5/7/2020	12	13.5	423	412	410.5	435.5	24	0.083	0.0196 U	0.0235	0.0196 U	0.0196 U	0.0244 U
	358-B3-15	5/7/2020	15	16.5	423	409	407.5	435.5	27	0.121	0.0379	0.0669	0.0171 U	0.0171 U	0.0214 U
	358-B3-20	5/7/2020	20	20.5	423	404	403.5	435.5	32	0.0384	0.0189 U	0.0189 U	0.0189 U	0.0189 U	0.0236 U
358-B4	358-B4-15	5/8/2020	15	16	427	412	410	435.5	24	0.0344 U	0.0275 U	0.0275 U	0.0275 U	0.0275 U	0.0344 U
	358-B4-20	5/8/2020	20	21.5	427	407	404.5	435.5	29	0.0294 U	0.0235 U	0.0235 U	0.0235 U	0.0235 U	0.0294 U
358-B5	358-B5-2.5	5/8/2020	2.5	4	426.37	423.5	421.5	435.5	12	0.0382 U	0.0306 U	0.0306 U	0.0306 U	0.0306 U	0.0382 U
	358-B5-5	5/8/2020	5	6.5	426.37	420.5	419.5	435.5	15	0.0321 U	0.0257 U	0.081	0.0257 U	0.0257 U	0.0321 U
	358-B5-10	5/8/2020	10	11.5	426.37	415.5	414.5	435.5	20	0.0281 U	0.0225 U	0.0225 U	0.0225 U	0.0225 U	0.0281 U
	358-B5-15	5/8/2020	15	16.5	426.37	410.5	409.5	435.5	25	0.0275 U	0.022 U	0.022 U	0.022 U	0.022 U	0.0275 U
	358-B5-20	5/8/2020	20	21	426.37	405.5	404.5	435.5	30	0.358	0.0188 U	0.0188 U	0.0188 U	0.0188 U	0.0234 U
358-B6	358-B5-25	5/8/2020	25	25.5	426.37	401	400.5	435.5	35	0.123	0.0236 U	0.0236 U	0.0236 U	0.0236 U	0.0295 U
	358-B6-5	5/8/2020	5	6.5	426.37	421.37	419.5	435.5	14	0.0395 U	0.0316 U	0.0949	0.0316 U	0.0316 U	0.0395 U
	358-B6-10	5/8/2020	10	11.5	426.37	416.37	414.5	435.5	19	0.0233 U	0.0187 U	0.0187 U	0.0187 U	0.0187 U	0.0233 U
	358-B6-20	5/8/2020	20	20.5	426.37	406.37	405.5	435.5	29	0.0269	0.0197 U	0.0197 U	0.0197 U	0.0197 U	0.0246 U

Location ID <sup>1</sup>	Sample ID	Sample Date	Start Depth (feet bgs)	End Depth (feet bgs)	Ground Surface Elevation at Time of Drilling <sup>3</sup> (feet)	Sample Start Elevation <sup>4</sup> (feet)	Sample End Elevation <sup>4</sup> (feet)	Approximate Current Ground Surface <sup>4,5</sup> (feet)	Approximate Sample Depth Below Current Ground Surface <sup>6</sup> (feet)	VOCs <sup>2</sup> (mg/kg)					
										PCE Breakdown Products					
										Tetrachloroethene (PCE)	Trichloroethene (TCE)	cis-1,2- Dichloroethene	trans-1,2- Dichloroethene	1,1- Dichloroethene	Vinyl Chloride
Soil Preliminary Cleanup Levels <sup>7</sup> (mg/kg)										0.05	0.03	0.0052	0.032	0.0025	0.001
358-B7	358-B7-10	5/11/2020	10	11	426.37	416.37	415	435.5	19	0.0218 U	0.0174 U	0.0174 U	0.0174 U	0.0174 U	0.0218 U
	358-B7-20	5/11/2020	20	21	426.37	406.37	405	435.5	29	0.0213 U	0.017 U	0.0245	0.017 U	0.017 U	0.0213 U
358-B8	358-B8-12.5	5/11/2020	12.5	13	426.37	413.87	413	435.5	22	0.0249 U	0.0199 U	0.0199 U	0.0199 U	0.0199 U	0.0249 U
	358-B8-20	5/11/2020	20	20.5	426.37	406.37	405.5	435.5	29	0.0305 U	0.0244 U	0.0244 U	0.0244 U	0.0244 U	0.0305 U
358-B9	358-B9-2.5	5/11/2020	2.5	4	426.37	423.87	422	435.5	12	0.0396 U	0.0317 U	0.0317 U	0.0317 U	0.0317 U	0.0396 U
	358-B9-7.5	5/11/2020	7.5	9	426.37	418.87	417	435.5	17	0.0124 U	0.00989 U	0.00989 U	0.00989 U	0.00989 U	0.0124 U
	358-B9-12.5	5/11/2020	12.5	13.5	426.37	413.87	412.5	435.5	22	0.0219 U	0.0175 U	0.0175 U	0.0175 U	0.0175 U	0.0219 U
	358-B9-20	5/11/2020	20	20.5	426.37	406.37	405.5	435.5	29	0.0276 U	0.0221 U	0.0221 U	0.0221 U	0.0221 U	0.0276 U
358-B10	358-B10-0.5	6/9/2020	0.5	2	426.37	425.87	424	435.5	10	0.0282 U	0.0226 U	0.0226 U	0.0226 U	0.0226 U	0.0282 U
	358-B10-25	6/9/2020	25	25.5	426.37	401.37	400.5	435.5	34	0.0122 U	0.00976 U	0.00976 U	0.00976 U	0.00976 U	0.0122 U
	358-B10-30	6/9/2020	30	30.5	426.37	396.37	395.5	435.5	39	0.0227 U	0.0182 U	0.0182 U	0.0182 U	0.0182 U	0.0227 U
	358-B10-35	6/9/2020	35	36	426.37	391.37	390	435.5	44	0.0209 U	0.0167 U	0.0167 U	0.0167 U	0.0167 U	0.0209 U
	358-B10-40	6/9/2020	40	40.75	426.37	386.37	385.25	435.5	49	0.0224 U	0.0179 U	0.0179 U	0.0179 U	0.0179 U	0.0224 U
	358-B10-45	6/9/2020	45	45.75	426.37	381.37	380.25	435.5	54	0.0262 U	0.0209 U	0.0209 U	0.0209 U	0.0209 U	0.0262 U
358-B11	358-B10-50	6/9/2020	50	50.5	426.37	376.37	375.5	435.5	59	0.0311 U	0.0249 U	0.0249 U	0.0249 U	0.0249 U	0.0311 U
	358-B11-1	6/10/2020	1	2.5	425.06	424.06	423.5	435.5	11	0.0199 U	0.0159 U	0.0159 U	0.0159 U	0.0159 U	0.0199 U
	358-B11-2.5	6/10/2020	2.5	4	425.06	423.5	422	435.5	12	0.0368 U	0.0294 U	0.0294 U	0.0294 U	0.0294 U	0.0368 U
	358-B11-10	6/10/2020	10	11.5	425.06	416	414.5	435.5	20	0.0235 U	0.0188 U	0.0188 U	0.0188 U	0.0188 U	0.0235 U
358-B12	358-B11-25	6/10/2020	25	26.5	425.06	401	399.5	435.5	35	0.0279 U	0.0223 U	0.0223 U	0.0223 U	0.0223 U	0.0279 U
	358-B12-15	6/10/2020	15	16.5	426.37	410	409	435.5	26	0.387	0.0612	0.0186 U	0.0186 U	0.0186 U	0.0232 U
	358-B12-25	6/10/2020	25	26	426.37	400	399	435.5	36	0.0600	0.027 U	0.027 U	0.027 U	0.027 U	0.0338 U
	358-B12-30	6/10/2020	30	30.75	426.37	395	394.5	435.5	41	0.0254 U	0.0203 U	0.0203 U	0.0203 U	0.0203 U	0.0254 U
358-B13	358-B13-2.5	6/11/2020	2.5	4	425.51	423.01	422	435.5	12	0.0328 U	0.0263 U	0.0263 U	0.0263 U	0.0263 U	0.0328 U
	358-B13-10	6/11/2020	10	11.5	425.51	415.51	414.5	435.5	20	0.0286 U	0.0229 U	0.0229 U	0.0229 U	0.0229 U	0.0286 U
	358-B13-20	6/11/2020	20	21.5	425.51	405.51	404.5	435.5	30	0.0233 U	0.0187 U	0.0187 U	0.0187 U	0.0187 U	0.0233 U
	358-B13-25	6/11/2020	25	26.5	425.51	400.51	399.5	435.5	35	0.0227 U	0.0182 U	0.0182 U	0.0182 U	0.0182 U	0.0227 U
358-B14	358-B14-7.5	6/11/2020	7.5	9	426.47	418.97	417	435.5	17	0.0216 U	0.0173 U	0.0173 U	0.0173 U	0.0173 U	0.0216 U
	358-B14-10	6/11/2020	10	11.5	426.47	416.47	414.5	435.5	19	0.0225 U	0.018 U	0.018 U	0.018 U	0.018 U	0.0225 U
	358-B14-12.5	6/11/2020	12.5	14	426.47	413.97	412	435.5	22	0.0316 U	0.0253 U	0.0253 U	0.0253 U	0.0253 U	0.0316 U
	358-B14-15	6/11/2020	15	16.5	426.47	411.47	409.5	435.5	24	0.0387 U	0.031 U	0.031 U	0.031 U	0.031 U	0.0387 U
	358-B14-20	6/11/2020	20	20.75	426.47	406.47	405.25	435.5	29	0.0249 U	0.0199 U	0.0199 U	0.0199 U	0.0199 U	0.0249 U
	358-B14-25	6/11/2020	25	26.5	426.47	401.47	399.5	435.5	34	0.0292 U	0.0233 U	0.0233 U	0.0233 U	0.0233 U	0.0292 U
358-B15	358-B15-1	6/11/2020	1	2.5	425.61	424.61	423.5	435.5	11	0.0251 U	0.02 U	0.02 U	0.02 U	0.02 U	0.0251 U
	358-B15-5	6/11/2020	5	6.5	425.61	420.61	419.5	435.5	15	0.0342 U	0.0274 U	0.0274 U	0.0274 U	0.0274 U	0.0342 U
	358-B15-10	6/11/2020	10	12.5	425.61	415.61	413.5	435.5	20	0.0217 U	0.0174 U	0.0174 U	0.0174 U	0.0174 U	0.0217 U
	358-B15-20	6/11/2020	20	21.5	425.61	405.61	404.5	435.5	30	0.0168 U	0.0134 U	0.0134 U	0.0134 U	0.0134 U	0.0168 U
	358-B15-25	6/11/2020	25	26.5	425.61	400.61	399.5	435.5	35	0.0275 U	0.022 U	0.0380	0.022 U	0.022 U	0.0275 U
358-PH1	358-PH1-10	6/9/2020	9	10	426	417	416	435.5	19	0.0226 U	0.018 U	0.018 U	0.018 U	0.018 U	0.0226 U
358-PH2	358-PH2-10	6/10/2020	9	10	426	417	416	435.5	19	0.0318 U	0.0255 U	0.0255 U	0.0255 U	0.0255 U	0.0318 U
358-PH3	358-PH3-10	6/9/2020	9	10	426	417	416	435.5	19	0.0261 U	0.0209 U	0.0407	0.0209 U	0.0209 U	0.0261 U
358-PH4	358-PH4-10	6/9/2020	9	10	426	417	416	435.5	19	0.0287 U	0.023 U	0.023 U	0.023 U	0.023 U	0.0287 U

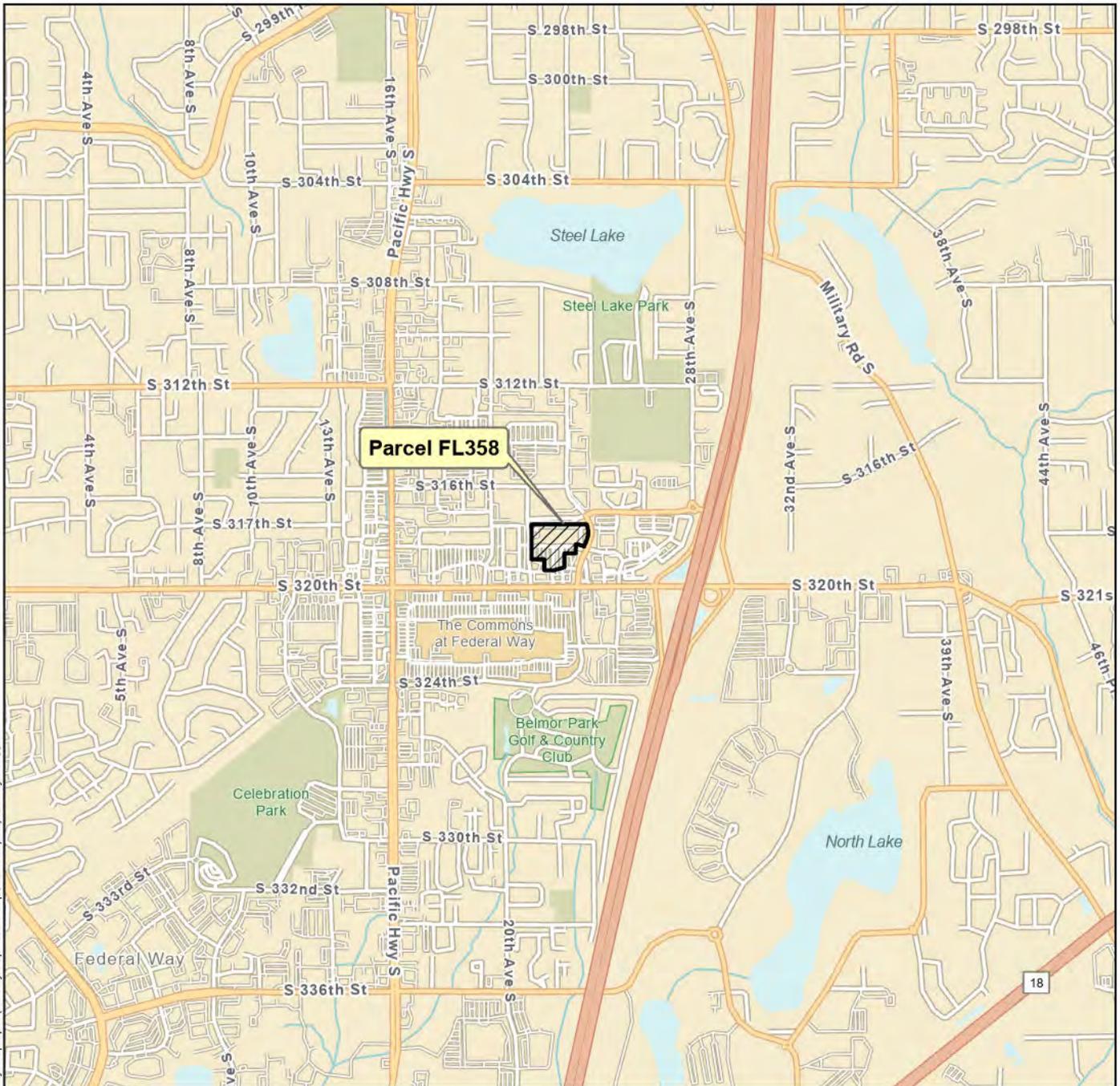
Location ID <sup>1</sup>	Sample ID	Sample Date	Start Depth (feet bgs)	End Depth (feet bgs)	Ground Surface Elevation at Time of Drilling <sup>3</sup> (feet)	Sample Start Elevation <sup>4</sup> (feet)	Sample End Elevation <sup>4</sup> (feet)	Approximate Current Ground Surface <sup>4,5</sup> (feet)	Approximate Sample Depth Below Current Ground Surface <sup>6</sup> (feet)	VOCs <sup>2</sup> (mg/kg)					
										PCE Breakdown Products					
										Tetrachloroethene (PCE)	Trichloroethene (TCE)	cis-1,2- Dichloroethene	trans-1,2- Dichloroethene	1,1- Dichloroethene	Vinyl Chloride
<b>Soil Preliminary Cleanup Levels<sup>7</sup> (mg/kg)</b>										<b>0.05</b>	<b>0.03</b>	<b>0.0052</b>	<b>0.032</b>	<b>0.0025</b>	<b>0.001</b>
358-PH5	358-PH5-4	6/10/2020	3	4	426	423	422	435.5	13	0.0269 U	0.0215 U	0.0215 U	0.0215 U	0.0215 U	0.0269 U
	358-PH5-7	6/10/2020	6	7	426	420	419	435.5	16	0.0495 U	0.0396 U	0.0396 U	0.0396 U	0.0396 U	0.0495 U
	358-PH5-10	6/10/2020	9	10	426	417	416	435.5	19	0.0281 U	0.0225 U	0.0225 U	0.0225 U	0.0225 U	0.0281 U
358-PH6	358-PH6-1	6/10/2020	0	1	426	426	425	435.5	10	0.0291 U	0.0233 U	0.0233 U	0.0233 U	0.0233 U	0.0291 U
	358-PH6-2	6/10/2020	1	2	426	425	424	435.5	11	0.0251 U	0.0201 U	0.0201 U	0.0201 U	0.0201 U	0.0251 U
	358-PH6-4	6/10/2020	3	4	426	423	422	435.5	13	0.0262 U	0.0209 U	0.0209 U	0.0209 U	0.0209 U	0.0262 U
	358-PH6-7	6/10/2020	6	7	426	420	419	435.5	16	0.0293 U	0.0235 U	0.0235 U	0.0235 U	0.0235 U	0.0293 U
	358-PH6-10	6/10/2020	9	10	426	417	416	435.5	19	0.0326 U	0.026 U	0.0554	0.026 U	0.026 U	0.0326 U
358-PH7	358-PH7-12	6/10/2020	11	12	422	413	412	435.5	23	1.95	0.0968	0.186	0.0264 U	0.0264 U	0.0331 U
	358-PH7-15	6/10/2020	14	15	422	410	409	435.5	26	10.1	0.403	0.757	0.0329 U	0.0329 U	0.0411 U
<b>Southern Excavation Confirmation Samples (OSG 2021)</b>															
358-PEX-10	358-PEX-10-1	7/20/2020	0	1	426	426	425	435.5	10	0.02 U	0.02 U	0.02 U	0.02 U	0.05 U	0.02 U
358-PEX-11	358-PEX-11-6	7/20/2020	5	6	426	421	420	435.5	15	0.02 U	0.02 U	0.02 U	0.02 U	0.05 U	0.02 U
358-PEX-13	358-PEX-13-6	7/20/2020	6	6	426	420	420	435.5	16	0.02 U	0.02 U	0.02 U	0.02 U	0.05 U	0.02 U
358-PEX-15	358-PEX-15-6	7/20/2020	6	6	426	420	420	435.5	16	0.02 U	0.02 U	0.037	0.02 U	0.05 U	0.02 U
358-PEX-29	358-PEX-29-8	7/21/2020	8	8	426	418	418	435.5	18	0.02 U	0.02 U	0.02 U	0.02 U	0.05 U	0.02 U
358-PEX-30	358-PEX-30-8	7/21/2020	8	8	426	418	418	435.5	18	0.030	0.02 U	0.02 U	0.02 U	0.05 U	0.02 U
358-PEX-41	358-PEX-41-1	7/21/2020	0	1	426	425	425	435.5	11	0.02 U	0.02 U	0.02 U	0.02 U	0.05 U	0.02 U
358-PEX-42	358-PEX-42-6	7/21/2020	6	7	426	420	420	435.5	16	0.02 U	0.02 U	0.02 U	0.02 U	0.05 U	0.02 U
358-PEX-45	358-PEX-45-1	7/22/2020	0	1	426	425	425	435.5	11	0.042	0.02 U	0.02 U	0.02 U	0.05 U	0.02 U
358-PEX-46	358-PEX-46-1	7/22/2020	0	1	426	426	425	435.5	10	0.020	0.02 U	0.02 U	0.02 U	0.05 U	0.02 U
358-PEX-54	358-PEX-54-10	7/23/2020	10	10	426	416	416	435.5	20	0.02 U	0.02 U	0.02 U	0.02 U	0.05 U	0.02 U
358-PEX-55	358-PEX-55-10	7/23/2020	10	10	426	416	416	435.5	20	0.02 U	0.02 U	0.02 U	0.02 U	0.05 U	0.02 U
358-PEX-56	358-PEX-56-6	7/23/2020	5	6	426	421	420	435.5	15	0.02 U	0.02 U	0.02 U	0.02 U	0.05 U	0.02 U
358-PEX-57	358-PEX-57-6	7/23/2020	5	6	426	421	420	435.5	15	0.02 U	0.02 U	0.062	0.02 U	0.05 U	0.02 U
358-PEX-58	358-PEX-58-6	7/23/2020	6	6	426	420	420	435.5	16	0.02 U	0.02 U	0.02 U	0.02 U	0.05 U	0.02 U
358-PEX-59	358-PEX-59-10	7/23/2020	10	10	426	416	416	435.5	20	0.02 U	0.02 U	0.02 U	0.02 U	0.05 U	0.02 U
358-PEX-60	358-PEX-60-8	7/23/2020	8	8	426	418	418	435.5	18	0.02 U	0.02 U	0.02 U	0.02 U	0.05 U	0.02 U
358-PEX-61	358-PEX-61-6	7/23/2020	5	6	426	421	420	435.5	15	0.02 U	0.02 U	0.02 U	0.02 U	0.05 U	0.02 U
358-PEX-62	358-PEX-62-2	7/23/2020	1	2	426	425	424	435.5	11	0.02 U	0.02 U	0.02 U	0.02 U	0.05 U	0.02 U
358-PEX-63	358-PEX-63-2	7/23/2020	1	2	426	425	424	435.5	11	0.02 U	0.02 U	0.02 U	0.02 U	0.05 U	0.02 U
358-PEX-64	358-PEX-64-6	7/23/2020	5	6	426	420.5	420.5	435.5	15	0.02 U	0.02 U	0.02 U	0.02 U	0.05 U	0.02 U
358-PEX-66	358-PEX-66-2	7/23/2020	1	2	426	425	424	435.5	11	0.02 U	0.02 U	0.02 U	0.02 U	0.05 U	0.02 U
358-PEX-67	358-PEX-67-2	7/23/2020	1	2	426	425	424	435.5	11	0.02 U	0.02 U	0.02 U	0.02 U	0.05 U	0.02 U
358-PEX-68	358-PEX-68-9	7/23/2020	9	9	426	417	417	435.5	19	0.02 U	0.02 U	0.02 U	0.02 U	0.05 U	0.02 U
358-PEX-70	358-PEX-70-6	7/23/2020	5	6	426	421	420	435.5	15	0.02 U	0.02 U	0.062	0.02 U	0.05 U	0.02 U
358-PEX-71	358-PEX-71-6	7/23/2020	5	6	426	420.5	420.5	435.5	15	0.02 U	0.02 U	0.037	0.02 U	0.05 U	0.02 U
358-PEX-76	358-PEX-76-6	7/24/2020	5	6	426	421	420	435.5	15	0.02 U	0.02 U	0.02 U	0.02 U	0.05 U	0.02 U
358-PEX-77	358-PEX-77-1	7/24/2020	0	1	426	426	425	435.5	10	0.02 U	0.02 U	0.02 U	0.02 U	0.05 U	0.02 U
358-PEX-80	358-PEX-80-6	7/27/2020	6	6	426	420	420	435.5	16	0.02 U	0.02 U	0.02 U	0.02 U	0.05 U	0.02 U
358-PEX-81	358-PEX-81-8	7/27/2020	8	8	426	418	418	435.5	18	0.02 U	0.02 U	0.02 U	0.02 U	0.05 U	0.02 U
SS-1-1.5	SS-1-1.5	8/14/2020	1.5	2	427	426	425	435.5	10	0.02 U	0.02 U	0.02 U	0.02 U	0.05 U	0.02 U
SS-2-1.5	SS-2-1.5	8/14/2020	1.5	2	428	427	426	435.5	9	0.02 U	0.02 U	0.02 U	0.02 U	0.05 U	0.02 U
SS-3-2.5	SS-3-2.5	8/14/2020	2.5	2.5	429	427	427	435.5	9	0.02 U	0.02 U	0.02 U	0.02 U	0.05 U	0.02 U

Location ID <sup>1</sup>	Sample ID	Sample Date	Start Depth (feet bgs)	End Depth (feet bgs)	Ground Surface Elevation at Time of Drilling <sup>3</sup> (feet)	Sample Start Elevation <sup>4</sup> (feet)	Sample End Elevation <sup>4</sup> (feet)	Approximate Current Ground Surface <sup>4,5</sup> (feet)	Approximate Sample Depth Below Current Ground Surface <sup>6</sup> (feet)	VOCs <sup>2</sup> (mg/kg)					
										PCE Breakdown Products					
										Tetrachloroethene (PCE)	Trichloroethene (TCE)	cis-1,2- Dichloroethene	trans-1,2- Dichloroethene	1,1- Dichloroethene	Vinyl Chloride
Soil Preliminary Cleanup Levels <sup>7</sup> (mg/kg)										0.05	0.03	0.0052	0.032	0.0025	0.001
<b>Northern Excavation Confirmation Samples (OSG 2021)</b>															
358-PEX-6	358-PEX-6-4	7/16/2020	3	4	422	419	418	435.5	17	0.03 U	0.02 U	0.03 U	0.03 U	0.05 U	0.02 U
358-PEX-20	358-PEX-20-11	7/20/2020	11	11	424	413	413	435.5	23	9.33	0.029	0.049	0.02 U	0.05 U	0.02 U
358-PEX-22	358-PEX-22-11	7/21/2020	10	11	423	413	413	435.5	23	1.3	0.12	0.17	0.02 U	0.05 U	0.02 U
358-PEX-32	358-PEX-32-10	7/21/2020	10	10	424	414	414	435.5	22	0.36	0.02 U	0.02 U	0.02 U	0.05 U	0.02 U
358-PEX-33	358-PEX-33-7	7/21/2020	6	7	423	417	416	435.5	19	0.035	0.02 U	0.02 U	0.02 U	0.05 U	0.02 U
358-PEX-34	358-PEX-34-10	7/21/2020	9	10	423	414	413	435.5	22	0.038	0.02 U	0.02 U	0.02 U	0.05 U	0.02 U
358-PEX-35	358-PEX-35-10	7/21/2020	9	10	422	413	413	435.5	23	0.02 U	0.02 U	0.02 U	0.02 U	0.05 U	0.02 U
358-PEX-49	358-PEX-49-11	7/22/2020	11	11	425	414	414	435.5	22	0.14	0.024	0.02 U	0.02 U	0.05 U	0.02 U
358-PEX-50	358-PEX-50-4	7/22/2020	4	5	426	422	421	435.5	14	0.02 U	0.02 U	0.02 U	0.02 U	0.05 U	0.02 U
358-PEX-51	358-PEX-51-10	7/22/2020	9	10	426	417	416	435.5	19	0.02 U	0.02 U	0.02 U	0.02 U	0.05 U	0.02 U
358-PEX-79	358-PEX-79-10	7/24/2020	9	10	425	416	415	435.5	20	0.02 U	0.02 U	0.02 U	0.02 U	0.05 U	0.02 U
358-PEX-83	358-PEX-83-10	7/28/2020	10	10	423	413	413	435.5	23	0.02 U	0.02 U	0.02 U	0.02 U	0.05 U	0.02 U
358-PEX-84	358-PEX-84-10	7/28/2020	10	10	422	412	412	435.5	24	0.028	0.02 U	0.02 U	0.02 U	0.05 U	0.02 U
358-PEX-85	358-PEX-85-10	7/28/2020	10	10	426	416	416	435.5	20	1.1	0.099	0.042	0.02 U	0.05 U	0.02 U
358-PEX-86	358-PEX-86-10	7/28/2020	10	10	425	415	415	435.5	21	0.39	0.037	0.034	0.02 U	0.05 U	0.02 U
358-PEX-87	358-PEX-87-10	7/28/2020	10	10	424.9	414.9	414.9	435.5	21	0.33	0.028	0.02 U	0.02 U	0.05 U	0.02 U
358-PEX-88	358-PEX-88-10	7/28/2020	10	10	426	416	416	435.5	20	0.029	0.02 U	0.02 U	0.02 U	0.05 U	0.02 U
358-PEX-89	358-PEX-89-10	7/28/2020	10	10	426	416	416	435.5	20	0.02 U	0.02 U	0.02 U	0.02 U	0.05 U	0.02 U
358-PEX-91	358-PEX-91-11	7/31/2020	11	11	425	414	414	435.5	22	0.58	0.091	0.082	0.02 U	0.05 U	0.02 U
358-PEX-92	358-PEX-92-10	7/31/2020	10	10	422.5	412.5	412.5	435.5	23	0.02 U	0.02 U	0.02 U	0.02 U	0.05 U	0.02 U
358-PEX-93	358-PEX-93-10	7/31/2020	10	10	426	416	416	435.5	20	0.02 U	0.02 U	0.02 U	0.02 U	0.05 U	0.02 U
358-PEX-95	358-PEX-95-10	7/31/2020	10	10	424	414	414	435.5	22	0.13	0.02 U	0.02 U	0.02 U	0.05 U	0.02 U
358-PEX-96	358-PEX-96-10	7/31/2020	10	10	423	413	413	435.5	23	0.02 U	0.02 U	0.02 U	0.02 U	0.05 U	0.02 U
358-PEX-97	358-PEX-97-11	8/3/2020	11	11	424	413	413	435.5	23	0.12	0.02 U	0.02 U	0.02 U	0.05 U	0.02 U
358-PEX-98	358-PEX-98-10	8/3/2020	10	10	424.5	414.5	414.5	435.5	21	0.076	0.02 U	0.02 U	0.02 U	0.05 U	0.02 U
358-PEX-99	358-PEX-99-10	8/3/2020	10	10	423	413	413	435.5	23	0.02 U	0.02 U	0.02 U	0.02 U	0.05 U	0.02 U
358-PEX-100	358-PEX-100-6	8/3/2020	6	6	423	417	417	435.5	19	0.02 U	0.02 U	0.02 U	0.02 U	0.05 U	0.02 U
358-PEX-101	358-PEX-101-11	8/4/2020	11	11	425.5	414.5	414.5	435.5	21	0.044	0.042	0.02 U	0.02 U	0.05 U	0.02 U
358-PEX-102	358-PEX-102-10	8/4/2020	10	10	426.5	416.5	416.5	435.5	19	0.02 U	0.02 U	0.02 U	0.02 U	0.05 U	0.02 U
358-PEX-103	358-PEX-103-6	8/4/2020	6	6	426	420	420	435.5	16	0.02 U	0.02 U	0.02 U	0.02 U	0.05 U	0.02 U
358-PEX-104	358-PEX-104-7	8/5/2020	7	7	426	419	419	435.5	17	0.02 U	0.02 U	0.02 U	0.02 U	0.05 U	0.02 U
358-PH105	358-PH105-10	8/27/2020	9	10	426	417	416	435.5	19	0.02 U	0.02 U	0.02 U	0.02 U	0.05 U	0.02 U
<b>Additional Investigation (SWI 2022)</b>															
FL358-MW5A	FL358-MW5A-23-24	6/22/2022	23	24	435.50	413	412	435.5	23	0.41	0.0091	0.0081	0.00075 U	0.00075 U	0.00075 U
	FL358-MW5A-25-26	6/22/2022	25	26	435.50	411	410	435.5	25	150	0.44	0.25	0.048 U	0.048 U	0.048 U
FL358-MW5B	FL358-MW5-21.5-22.5	6/21/2022	21.5	22.5	435.50	414	413	435.5	22	0.028	0.0022	0.0018	0.00078 U	0.00078 U	0.00078 U
	FL358-MW5-24.5-25.5	6/21/2022	24.5	25.5	435.50	411	410	435.5	25	1.1	0.038	0.032	0.00076 U	0.00076 U	0.00076 U
	FL358-MW5-28-29	6/21/2022	28	29	435.50	408	407	435.5	28	11	0.34	0.27	0.0014	0.00089 U	0.0024
	FL358-MW5-33-34	6/21/2022	33	34	435.50	403	402	435.5	33	0.00091 U	0.00091 U	0.00091 U	0.00091 U	0.00091 U	0.00091 U
	FL358-MW5-36-37	6/21/2022	36	37	435.50	400	399	435.5	36	0.00084 U	0.00084 U	0.00084 U	0.00084 U	0.00084 U	0.00084 U
	FL358-MW5-37-38	6/21/2022	37	38	435.50	399	398	435.5	37	0.00079 U	0.00079 U	0.00079 U	0.00079 U	0.00079 U	0.00079 U

Location ID <sup>1</sup>	Sample ID	Sample Date	Start Depth (feet bgs)	End Depth (feet bgs)	Ground Surface Elevation at Time of Drilling <sup>3</sup> (feet)	Sample Start Elevation <sup>4</sup> (feet)	Sample End Elevation <sup>4</sup> (feet)	Approximate Current Ground Surface <sup>4,5</sup> (feet)	Approximate Sample Depth Below Current Ground Surface <sup>6</sup> (feet)	VOCs <sup>2</sup> (mg/kg)					
										PCE Breakdown Products					
										Tetrachloroethene (PCE)	Trichloroethene (TCE)	cis-1,2- Dichloroethene	trans-1,2- Dichloroethene	1,1- Dichloroethene	Vinyl Chloride
<b>Soil Preliminary Cleanup Levels<sup>7</sup> (mg/kg)</b>										<b>0.05</b>	<b>0.03</b>	<b>0.0052</b>	<b>0.032</b>	<b>0.0025</b>	<b>0.001</b>
FL358-MW6	FL358-MW6-24-25	6/21/2022	24	25	435.73	412	411	435.7	24	<b>0.10</b>	<b>0.016</b>	<b>0.039</b>	0.00042 U	0.00042 U	<b>0.0025</b>
	DUP-220616 <sup>5</sup>	6/16/2022	24	25	435.73	412	411	435.7	24	<b>0.16</b>	<b>0.021</b>	<b>0.048</b>	0.00085 U	0.00085 U	<b>0.0029</b>
	FL358-MW6-29-30	6/21/2022	29	30	435.73	407	406	435.7	29	0.00076 U	0.00076 U	0.00076 U	0.00076 U	0.00076 U	0.00076 U
	FL358-MW6-34-35	6/21/2022	34	35	435.73	402	401	435.7	34	0.00089 U	0.00089 U	<b>0.0018</b>	0.00089 U	0.00089 U	0.00089 U
	FL358-MW6-36-37	6/21/2022	36	37	435.73	400	399	435.7	36	0.00082 U	0.00082 U	0.00082 U	0.00082 U	0.00082 U	0.00082 U
FL358-MW6-37-38	6/21/2022	37	38	435.73	399	398	435.7	37	0.00095 U	0.00095 U	0.00095 U	0.00095 U	0.00095 U	0.00095 U	
FL358-MW8	FL358-MW8-22-23	6/15/2022	22	23	435.67	414	413	435.7	22	<b>0.0018</b>	0.00086 U	0.00086 U	0.00086 U	0.00086 U	0.00086 U
	FL358-MW8-27-28	6/15/2022	27	28	435.67	409	408	435.7	27	0.00088 U	0.00088 U	0.00088 U	0.00088 U	0.00088 U	0.00088 U
	FL358-MW8-32-33	6/15/2022	32	33	435.67	404	403	435.7	32	0.00088 U	0.00088 U	0.00088 U	0.00088 U	0.00088 U	0.00088 U
	FL358-MW8-36-37	6/16/2022	36	37	435.67	400	399	435.7	36	0.00086 U	0.00086 U	0.00086 U	0.00086 U	0.00086 U	0.00086 U
	FL358-MW8-37-38	6/16/2022	37	38	435.67	399	398	435.7	37	0.00086 U	0.00086 U	0.00086 U	0.00086 U	0.00086 U	0.00086 U
FL358-MW9	FL358-MW9-22-23	6/16/2022	22	23	435.41	413	412	435.4	22	0.00078 U	0.00078 U	0.00078 U	0.00078 U	0.00078 U	0.00078 U
	FL358-MW9-27-28	6/16/2022	27	28	435.41	408	407	435.4	27	0.00084 U	0.00084 U	0.00084 U	0.00084 U	0.00084 U	0.00084 U
	DUP-220621	6/21/2022	27	28	435.41	408	407	435.4	27	0.00074 U	0.00074 U	0.00074 U	0.00074 U	0.00074 U	0.00074 U
	FL358-MW9-31-32	6/16/2022	31	32	435.41	404	403	435.4	31	0.00088 U	0.00088 U	<b>0.017</b>	0.00088 U	0.00088 U	0.00088 U
	FL358-MW9-37-38	6/16/2022	37	38	435.41	398	397	435.4	37	0.00082 U	0.00082 U	0.00082 U	0.00082 U	0.00082 U	0.00082 U
	FL358-MW9-40-41	6/16/2022	40	41	435.41	395	394	435.4	40	0.00088 U	0.00088 U	0.00088 U	0.00088 U	0.00088 U	0.00088 U
	FL358-MW9-41-42	6/16/2022	41	42	435.41	394	393	435.4	41	0.00082 U	0.00082 U	0.00082 U	0.00082 U	0.00082 U	0.00082 U
FL358-MW14	FL358-MW14-23-24	6/15/2022	23	24	434.44	411	410	434.4	23	0.00092 U	0.00092 U	0.00092 U	0.00092 U	0.00092 U	0.00092 U
	FL358-MW14-28-29	6/15/2022	28	29	434.44	406	405	434.4	28	0.00076 U	0.00076 U	0.00076 U	0.00076 U	0.00076 U	0.00076 U
	FL358-MW14-33-34	6/15/2022	33	34	434.44	401	400	434.4	33	0.00074 U	0.00074 U	0.00074 U	0.00074 U	0.00074 U	0.00074 U
	FL358-MW14-37-38	6/15/2022	37	38	434.44	397	396	434.4	37	0.00098 U	0.00098 U	0.00098 U	0.00098 U	0.00098 U	0.00098 U
	FL358-MW14-38.5-39.5	6/15/2022	38.5	39.5	434.44	396	395	434.4	39	0.00086 U	0.00086 U	0.00086 U	0.00086 U	0.00086 U	0.00086 U

**Notes:**

- <sup>1</sup> Sample locations are shown on Figure 10.
  - <sup>2</sup> Volatile organic compounds (VOCs) analyzed by Environmental Protection Agency (EPA) Method 8260.
  - <sup>3</sup> Ground surface elevation measured at time of respective drilling and/or confirmation samples taken. See Table 1 for additional details
  - <sup>4</sup> Vertical datum for elevation is feet NAVD88.
  - <sup>5</sup> Current ground surface of borings completed in 2022 is based on a survey provided by Kiewit. Current ground surface for other locations is approximated as Elevation 435.5 feet.
  - <sup>6</sup> The depth below the current ground surface is the calculated delta between the current ground surface elevation and the Sample Start Elevation.
  - <sup>7</sup> Preliminary cleanup levels calculated as shown in Appendix E.
- bgs = below ground surface  
mg/kg = milligrams per kilogram  
PH - Supplemental test pit (pothole) investigation sample  
PEX - Post-excavation confirmation sample  
U = analyte was not detected above the Practical Quantitation Limit (PQL)  
**Bold** indicates analyte was detected above the Practical Quantitation Limit (PQL).  
 Shading indicates analyte was detected at a concentration greater than the preliminary cleanup level.  
*Italicized* indicates analyte was not detected, but the PQL was greater than the preliminary cleanup level.



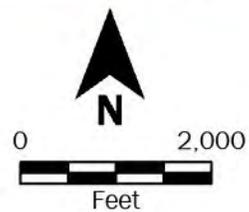
P:\4\4082039\GIS\FL358\408203903\_F01\_Vicinity Map.aprx Vicinity Map Date Exported: 12/21/22 by mwwoods



Source(s):  
 • ESRI

Coordinate System: NAD 1983 UTM Zone 10N

**Disclaimer:** This figure was created for a specific purpose and project. Any use of this figure for any other project or purpose shall be at the user's sole risk and without liability to GeoEngineers. The locations of features shown may be approximate. GeoEngineers makes no warranty or representation as to the accuracy, completeness, or suitability of the figure, or data contained therein. The file containing this figure is a copy of a master document, the original of which is retained by GeoEngineers and is the official document of record.



<b>Vicinity Map</b>	
Remedial Investigation and Feasibility Study Y Pay Mor Site Federal Way, Washington	
	<b>Figure 1</b>



**Legend**

- Surplus Property (Potential TOD)
- FL358 Parcel Boundary
- Former Y Pay Mor Cleaners
- Stormwater Detention Vaults

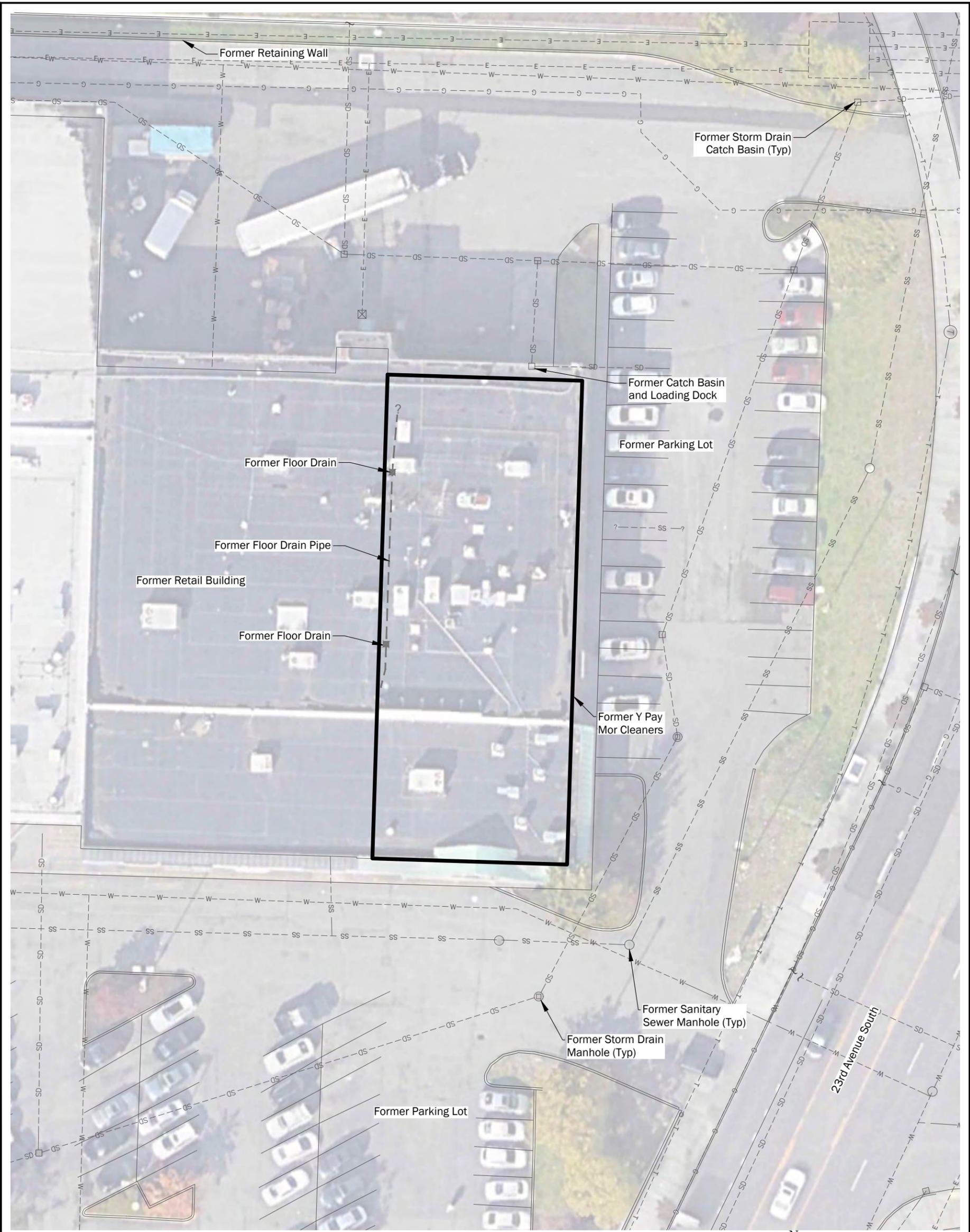


**Notes:**

1. The locations of all features shown are approximate.
  2. TOD = transit-oriented development; ROW = right-of-way
  3. This drawing is for information purposes. It is intended to assist in showing features discussed in an attached document. GeoEngineers, Inc. cannot guarantee the accuracy and content of electronic files. The master file is stored by GeoEngineers, Inc. and will serve as the official record of this communication.
- Data Source: Google Earth Pro Aerial Image, 2017

<b>Site Plan</b>	
Remedial Investigation Y Pay Mor Site Federal Way, Washington	
<b>GEOENGINEERS</b>	<b>Figure 2</b>

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**Legend**

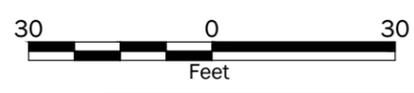
- Former Y Pay Mor Cleaners
- SS = Sanitary Sewer Utility
- SD = Stormwater Utility
- W = Water Utility
- E = Electrical Utility
- G = Gas Utility
- T = Telephone Utility

**Notes:**

1. The locations of all features shown are approximate.
2. This drawing is for information purposes. It is intended to assist in showing features discussed in an attached document. GeoEngineers, Inc. cannot guarantee the accuracy and content of electronic files. The master file is stored by GeoEngineers, Inc. and will serve as the official record of this communication.

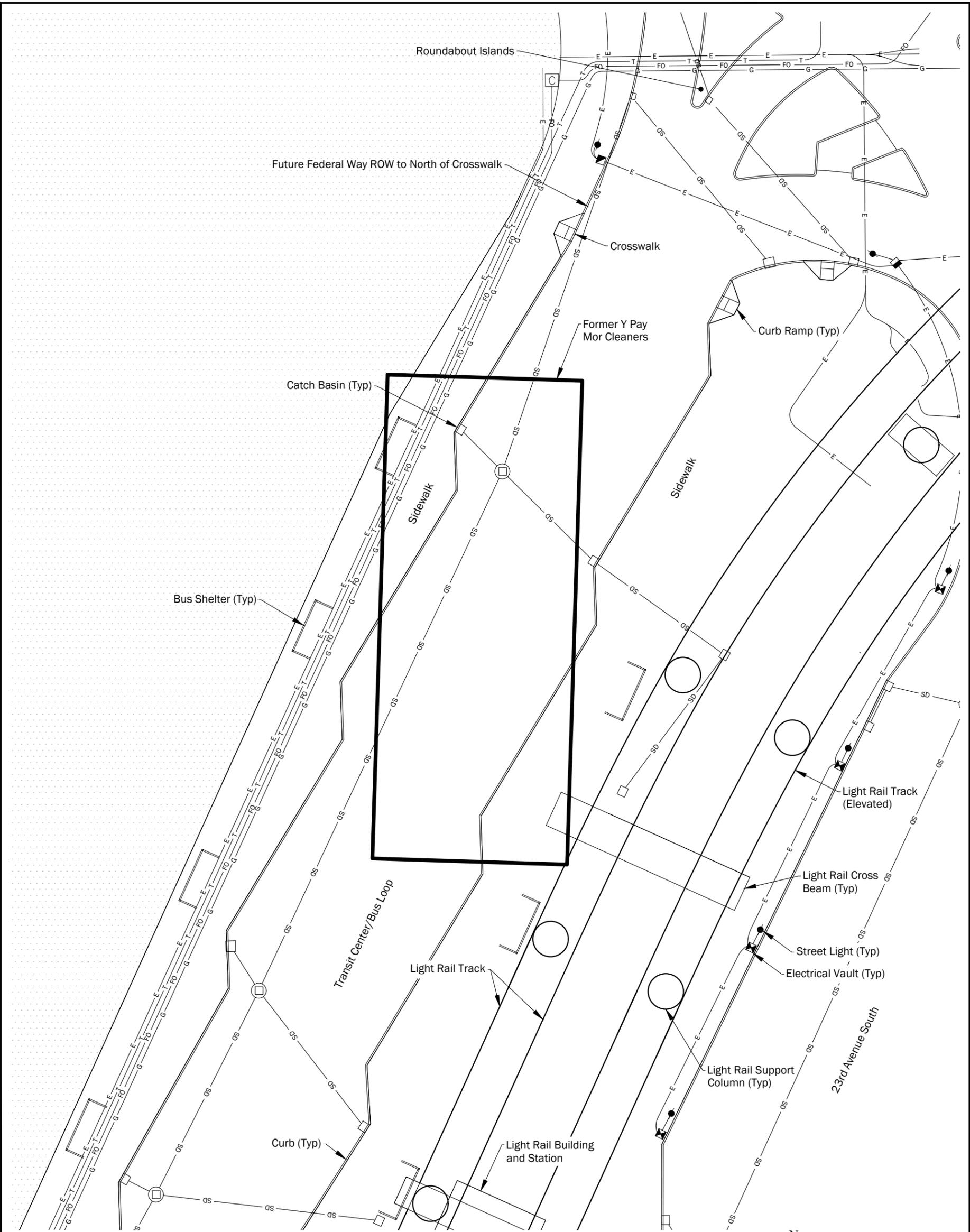
Data Source: Existing features from xFWEA-L15-VSF003.  
 Imagery from Google Earth Pro dated 7/1/2018.

Projection: Project Datum Washington State Planes, North Zone, US Foot.



<b>Previous Infrastructure and Site Features</b>	
Remedial Investigation Y Pay Mor Site Federal Way, Washington	
	<b>Figure 3</b>

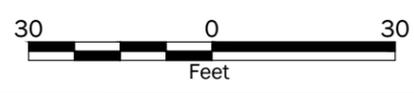
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**Legend**

- Former Y Pay Mor Cleaners
- Surplus Property Boundary (Potential TOD) To Remain Unpaved Until Development

- SS = Sanitary Sewer utility
- SD = Stormwater Utility
- W = Water Utility
- E = Electrical Utility
- FO = Fiber Optic Utility
- T = Telephone Utility
- G = Gas Utility

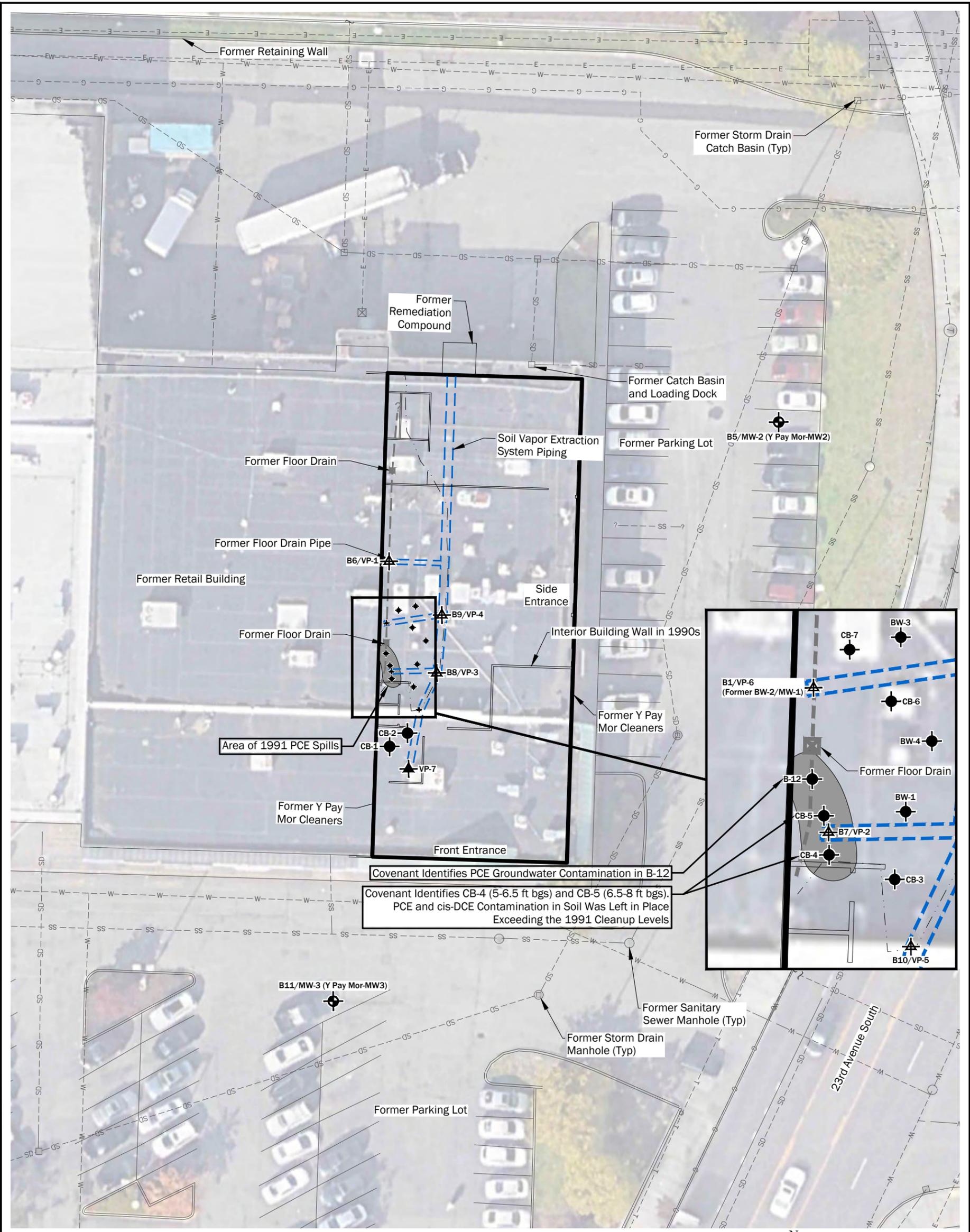


- Notes:**
1. The locations of all features shown are approximate.
  2. This drawing is for information purposes. It is intended to assist in showing features discussed in an attached document. GeoEngineers, Inc. cannot guarantee the accuracy and content of electronic files. The master file is stored by GeoEngineers, Inc. and will serve as the official record of this communication.
  3. TOD = Transit Oriented Development

Data Source: Design plans S3.15 S07-CDP536, S07-UCP336 dated October 28, 2021 completed by Kiewit/Parsons

Projection: Project Datum Washington State Planes, North Zone, US Foot.

<b>Planned Infrastructure and Site Features</b>	
Remedial Investigation Y Pay Mor Site Federal Way, Washington	
	<b>Figure 4</b>



**Legend**

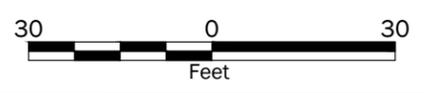
- Former Y Pay Mor Cleaners
- SS = Sanitary Sewer Utility
- SD = Stormwater Utility
- W = Water Utility
- E = Electrical Utility
- G = Gas Utility
- T = Telephone Utility
- Former Soil Vapor Extraction System Piping
- Area of 1991 PCE Spills
- Soil Boring
- Monitoring Well
- Soil Vapor Extraction System Well
- Boring and SVE System Well

**Notes:**

1. The locations of all features shown are approximate.
2. This drawing is for information purposes. It is intended to assist in showing features discussed in an attached document. GeoEngineers, Inc. cannot guarantee the accuracy and content of electronic files. The master file is stored by GeoEngineers, Inc. and will serve as the official record of this communication.
3. cis-DCE = cis-1,2-dichloroethene, PCE = Tetrachloroethene, MTCA = Model Toxics Control Act

Data Source: Existing features from xFWEA-L15-VSF003.  
Imagery from Google Earth Pro dated 7/1/2018.

Projection: Project Datum Washington State Planes, North Zone, US Foot.



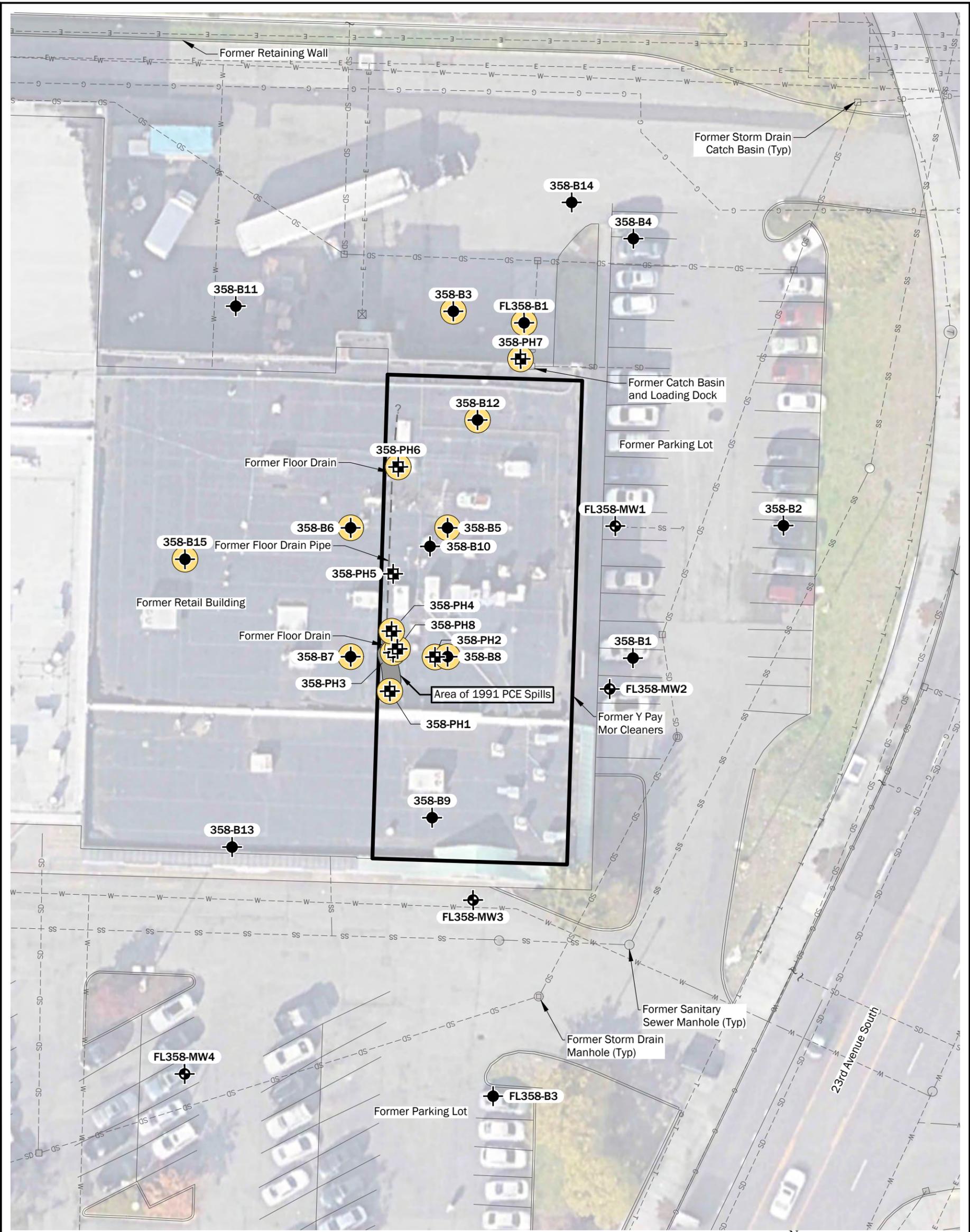
**Remedial Action Sample Locations 1992 - 1994**

Remedial Investigation  
Y Pay Mor Site  
Federal Way, Washington



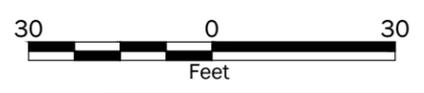
**Figure 5**

\\geoengineers.com\WANI\Projects\4\408203903\CAD\03\FL358\RI\Deliverable\408203903\_F06\_Pre-Remedial Excavation Site.dwg Date Exported: 8/25/2023 12:28 PM - by Michael R. Woods



**Legend**

- Former Y Pay Mor Cleaners
- SS = Sanitary Sewer Utility
- SD = Stormwater Utility
- W = Water Utility
- E = Electrical Utility
- G = Gas Utility
- T = Telephone Utility
- Soil Boring
- Test Pit
- Monitoring Well
- Area of 1991 PCE Spills
- Concentrations of COCs in Soil > MTCA Method A or B Cleanup Levels from 2017-2022 Site Characterization Samples



**Notes:**

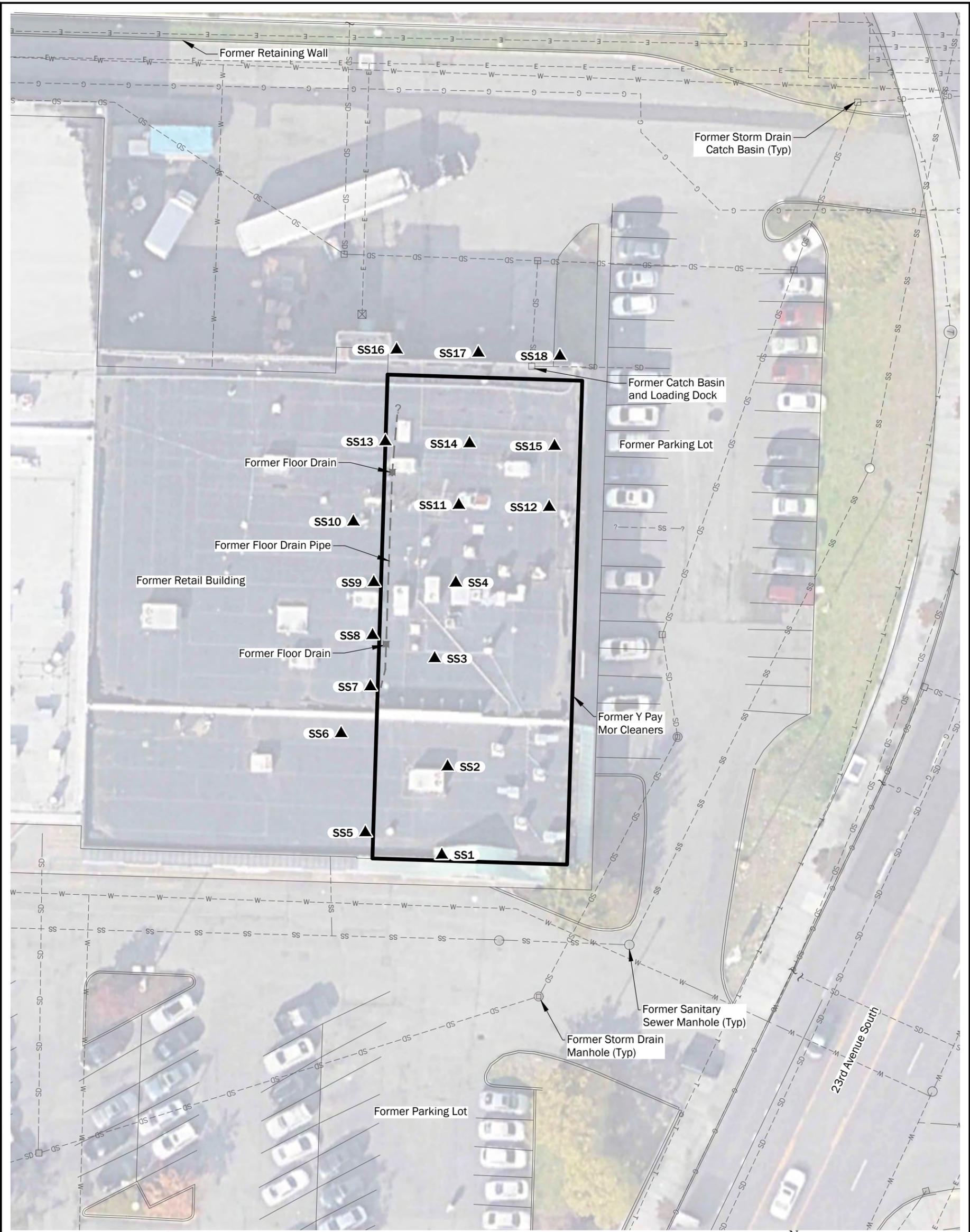
1. The locations of all features shown are approximate.
2. This drawing is for information purposes. It is intended to assist in showing features discussed in an attached document. GeoEngineers, Inc. cannot guarantee the accuracy and content of electronic files. The master file is stored by GeoEngineers, Inc. and will serve as the official record of this communication.
3. cis-DCE = cis-1,2-dichloroethene, PCE = Tetrachloroethene, MTCA = Model Toxics Control Act

Data Source: Existing features from xFWEA-L15-VSF003.  
Imagery from Google Earth Pro dated 7/1/2018.

Projection: Project Datum Washington State Planes, North Zone, US Foot.

<b>Pre-Remedial Excavation Site Characterization Soil and Groundwater Sampling Locations (2017 to 2020)</b>	
Remedial Investigation Y Pay Mor Site Federal Way, Washington	
	<b>Figure 6</b>

\\geoengineers.com\WAW\Projects\4\4082039\3\CAD\03\FL358\RI\Deliverable\408203903\_F07\_Soil Vapor Sample Locations.dwg F07 Date Exported: 8/25/2023 12:28 PM - by Michael R. Woods

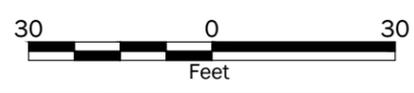


**Legend**

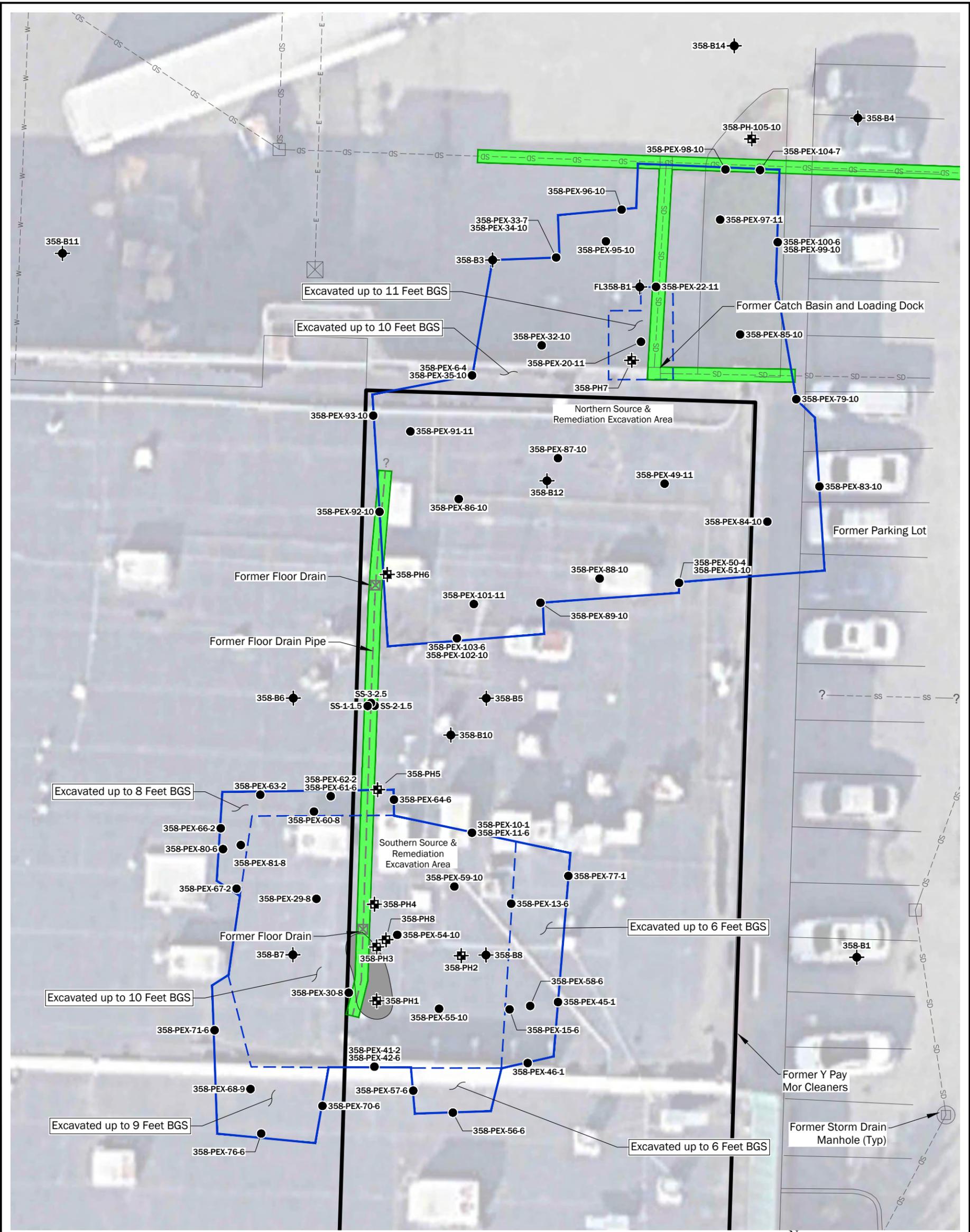
- Former Y Pay Mor Cleaners
- ▲ Soil Vapor Point
- SS = Sanitary Sewer Utility
- SD = Stormwater Utility
- W = Water Utility
- E = Electrical Utility
- G = Gas Utility
- T = Telephone Utility

- Notes:**
1. The locations of all features shown are approximate.
  2. This drawing is for information purposes. It is intended to assist in showing features discussed in an attached document. GeoEngineers, Inc. cannot guarantee the accuracy and content of electronic files. The master file is stored by GeoEngineers, Inc. and will serve as the official record of this communication.

Data Source: Existing features from xFWEA-L15-VSF003.  
 Imagery from Google Earth Pro dated 7/1/2018.  
 Projection: Project Datum Washington State Planes, North Zone, US Foot.



<b>Soil Vapor Sample Locations - 2018</b>	
Remedial Investigation Y Pay Mor Site Federal Way, Washington	
	<b>Figure 7</b>



**Legend**

- Former Y Pay Mor Cleaners
- Extent of Interim Action Excavation
- Extent of Utility Removed for Remediation Purposes (Historical Contaminant Migration Pathway)
- Area of 1991 PCE Spills
- Soil Boring
- Soil Confirmation Sample
- Test Pit
- SS = Sanitary Sewer Utility
- SD = Stormwater Utility
- W = Water Utility
- E = Electrical Utility

**Notes:**

1. The locations of all features shown are approximate.
2. This drawing is for information purposes. It is intended to assist in showing features discussed in an attached document. GeoEngineers, Inc. cannot guarantee the accuracy and content of electronic files. The master file is stored by GeoEngineers, Inc. and will serve as the official record of this communication.
3. PCE = Tetrachloroethene, BGS = below ground surface in 2020

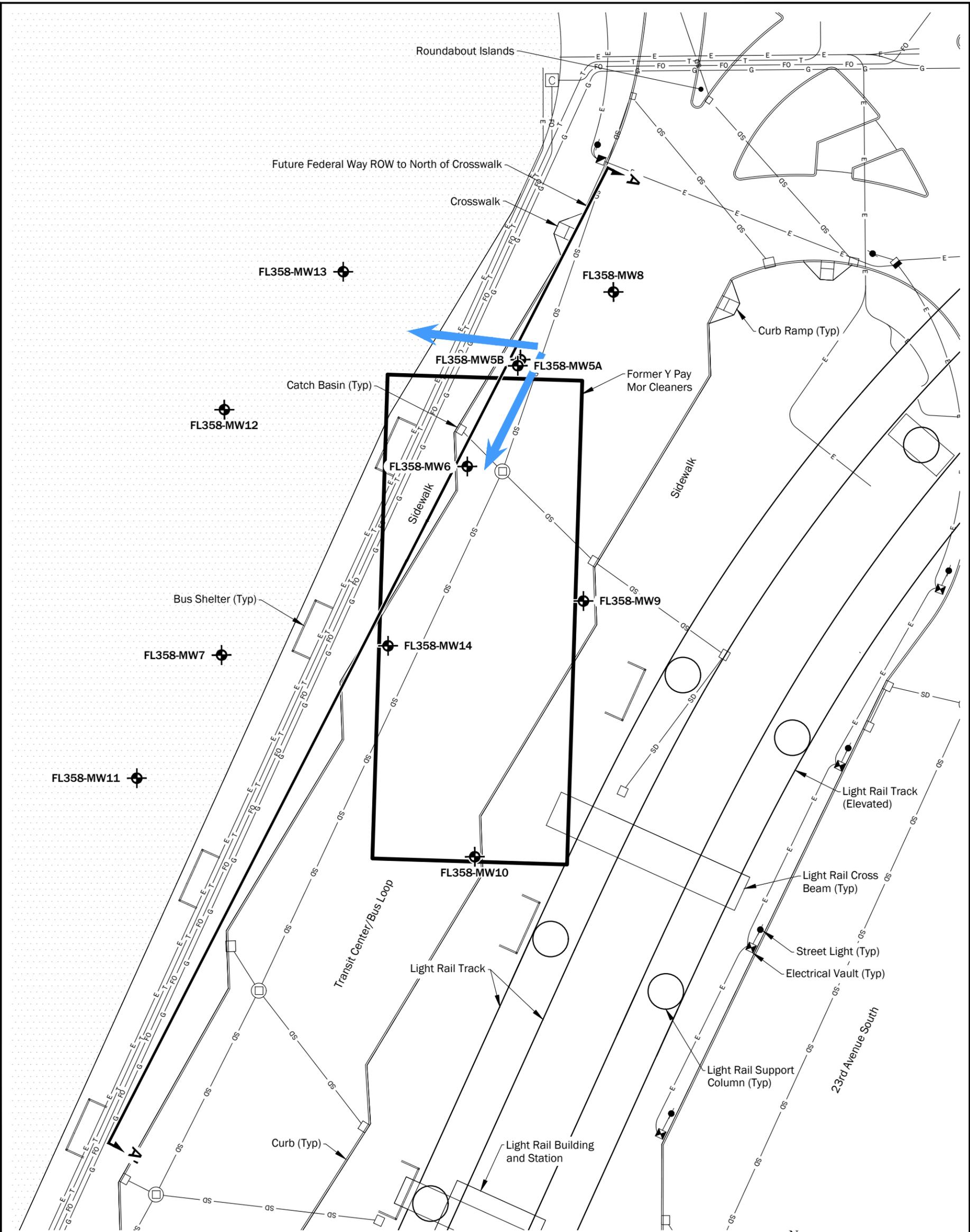
Data Source: Existing features from xFWEA-L15-VSF003.  
Imagery from Google Earth Pro dated 7/1/2018.

Projection: Project Datum Washington State Planes, North Zone, US Foot.

<b>Remedial Excavation and Soil Analytical Results - 2020</b>	
Remedial Investigation Y Pay Mor Site Federal Way, Washington	
	<b>Figure 8</b>

\\geoengineers.com\WAN\Projects\4\408203903\CAD\03\FL358\RI\Deliverable\408203903\_F08\_Remedial Excavation and Soil Analytical Results - 2020.dwg F08 Date Exported: 8/29/2023 7:52 PM - by Michael R. Woods

\\geoengineers.com\WAN\Projects\4\4082039\CAD\03\FL358\RI\Deliverable\408203903\_F09\_Remedial Investigation - 2022.dwg F09 Date Exported:10/19/2023 10:59 AM - by Michael R. Woods



**Legend**

- Former Y Pay Mor Cleaners
- Surplus Property Boundary (Potential TOD) To Remain Unpaved Until Development
- Monitoring Well (Shannon & Wilson, 2022)

Approximate Groundwater Flow Direction of Shallow Aquifer (variable range shown)

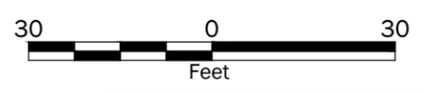
- SS = Sanitary Sewer utility
- SD = Stormwater Utility
- W = Water Utility
- E = Electrical Utility
- FO = Fiber Optic Utility
- T = Telephone Utility
- G = Gas Utility

**A A'**  
Cross Section A to A' as presented in Figure 9

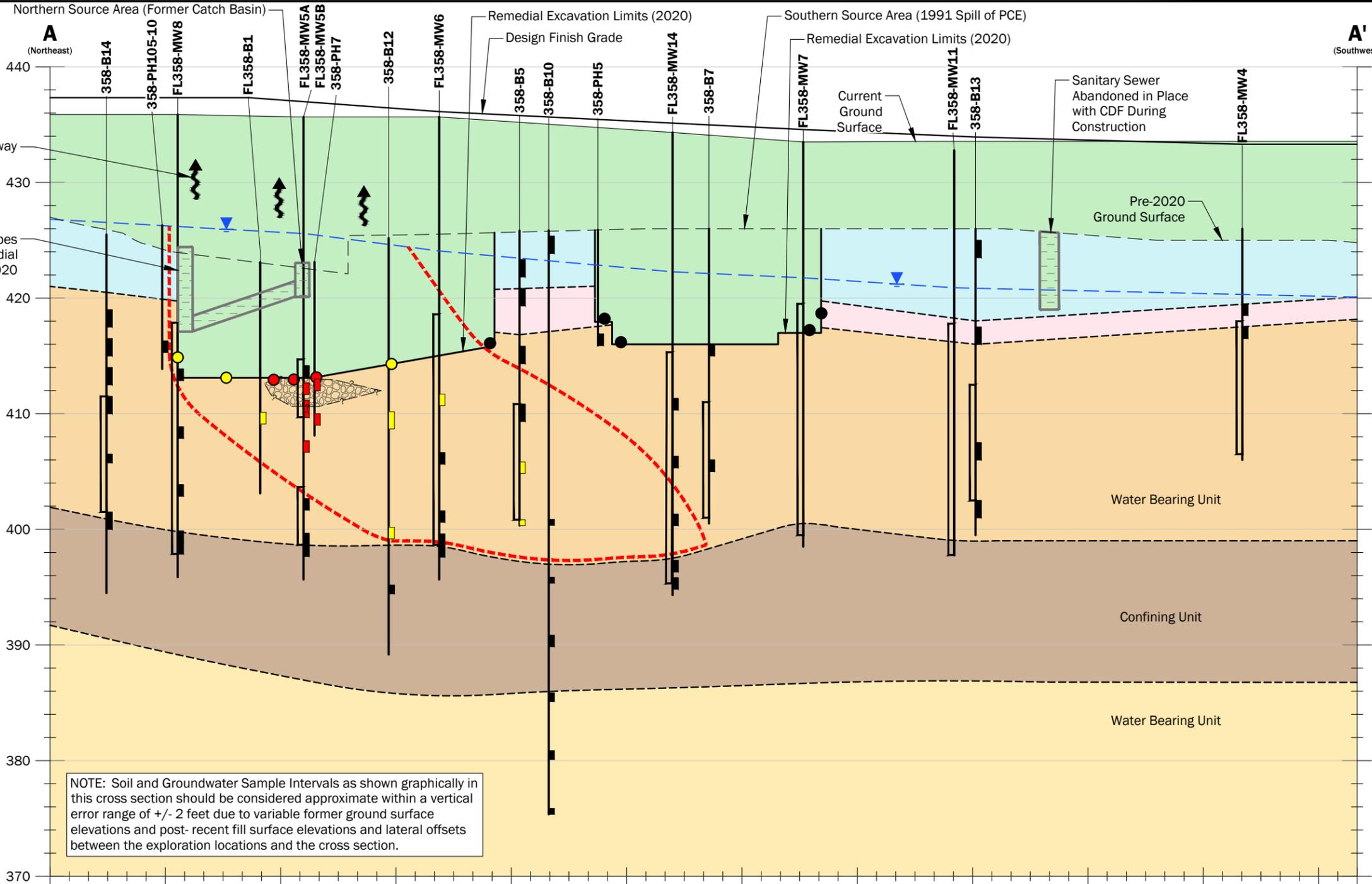
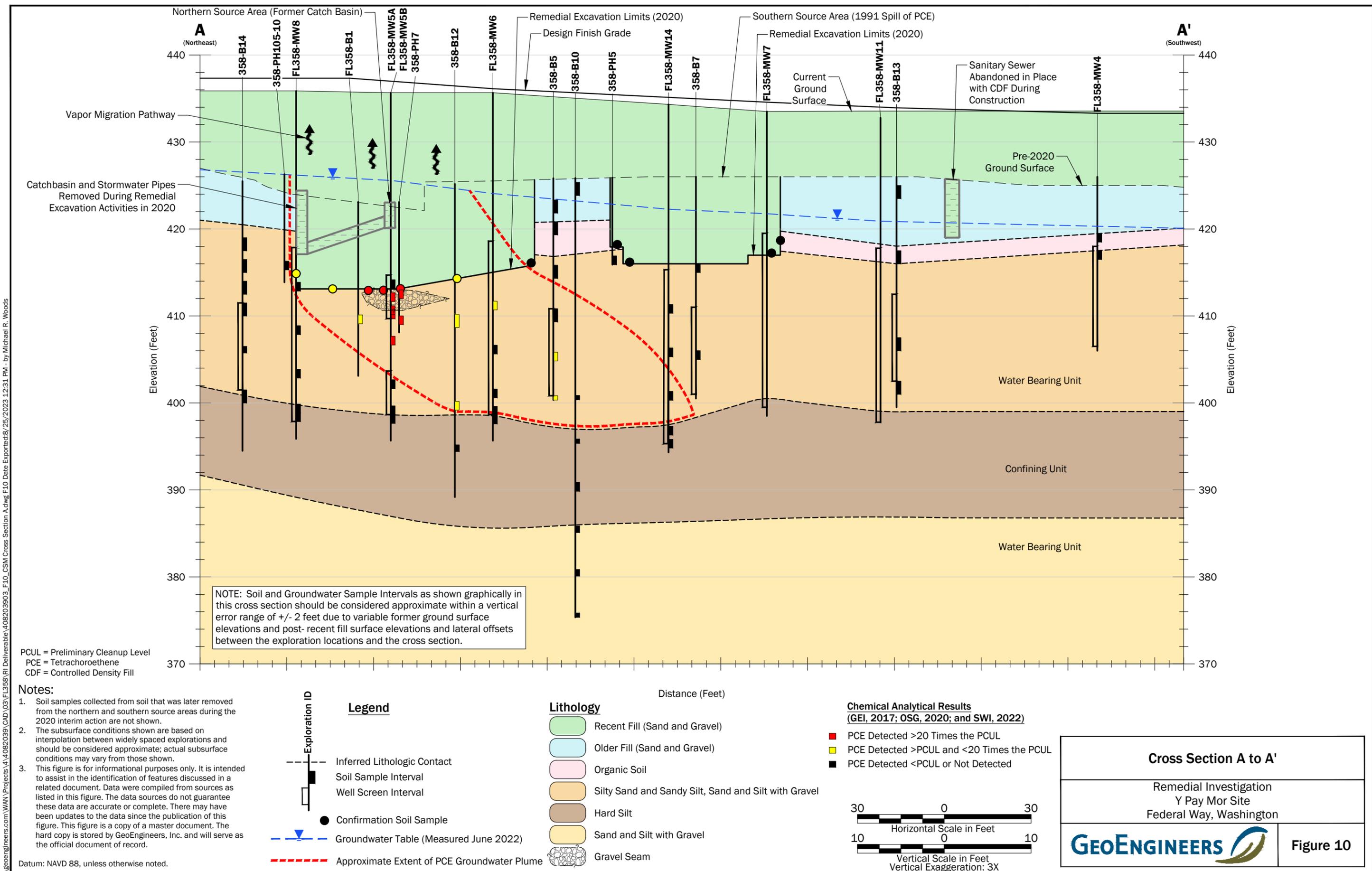
- Notes:**
1. The locations of all features shown are approximate.
  2. This drawing is for information purposes. It is intended to assist in showing features discussed in an attached document. GeoEngineers, Inc. cannot guarantee the accuracy and content of electronic files. The master file is stored by GeoEngineers, Inc. and will serve as the official record of this communication.
  3. TOD = Transit Oriented Development

Data Source: Design plans S3.15 S07-CDP536, S07-UCP336 dated October 28, 2021 completed by Kiewit/Parsons

Projection: Project Datum Washington State Planes, North Zone, US Foot.



<b>Remedial Investigation - 2022</b>	
Remedial Investigation Y Pay Mor Site Federal Way, Washington	
	<b>Figure 9</b>



NOTE: Soil and Groundwater Sample Intervals as shown graphically in this cross section should be considered approximate within a vertical error range of +/- 2 feet due to variable former ground surface elevations and post-recent fill surface elevations and lateral offsets between the exploration locations and the cross section.

PCUL = Preliminary Cleanup Level  
PCE = Tetrachloroethene  
CDF = Controlled Density Fill

- Notes:**
1. Soil samples collected from soil that was later removed from the northern and southern source areas during the 2020 interim action are not shown.
  2. The subsurface conditions shown are based on interpolation between widely spaced explorations and should be considered approximate; actual subsurface conditions may vary from those shown.
  3. This figure is for informational purposes only. It is intended to assist in the identification of features discussed in a related document. Data were compiled from sources as listed in this figure. The data sources do not guarantee these data are accurate or complete. There may have been updates to the data since the publication of this figure. This figure is a copy of a master document. The hard copy is stored by GeoEngineers, Inc. and will serve as the official document of record.

**Legend**

- Exploration ID
- Inferred Lithologic Contact
- Soil Sample Interval
- Well Screen Interval
- Confirmation Soil Sample
- Groundwater Table (Measured June 2022)
- Approximate Extent of PCE Groundwater Plume

**Lithology**

- Recent Fill (Sand and Gravel)
- Older Fill (Sand and Gravel)
- Organic Soil
- Silty Sand and Sandy Silt, Sand and Silt with Gravel
- Hard Silt
- Sand and Silt with Gravel
- Gravel Seam

**Chemical Analytical Results (GEI, 2017; OSG, 2020; and SWI, 2022)**

- PCE Detected >20 Times the PCUL
- PCE Detected >PCUL and <20 Times the PCUL
- PCE Detected <PCUL or Not Detected

**Scale:**  
Horizontal Scale in Feet: 0 to 30  
Vertical Scale in Feet: 0 to 10  
Vertical Exaggeration: 3X

**Cross Section A to A'**

Remedial Investigation  
Y Pay Mor Site  
Federal Way, Washington

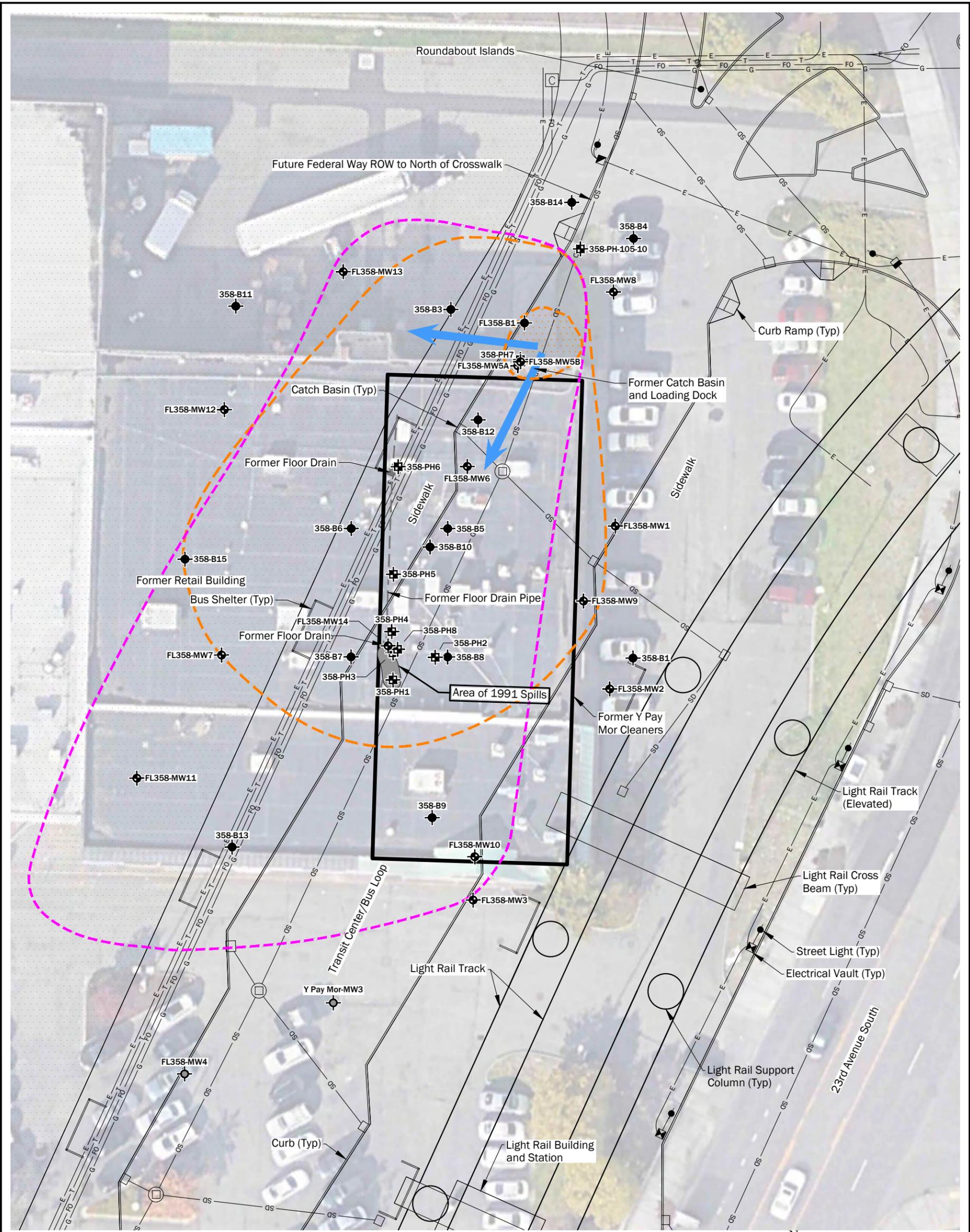
**GEOENGINEERS**

**Figure 10**

\\geoengineers.com\WAW\Projects\4\0820393\CAD\03\FL358\RI\Deliverable\408203903\_F10\_CSM Cross Section A.dwg F10 Date Exported:8/25/2023 12:31 PM - by Michael R. Woods

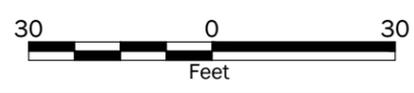
Datum: NAVD 88, unless otherwise noted.

\\geoenr.com\WAW\Projects\4\4082039\3\CAD\03\FL358\RI\Deliverable\408203903\_F11\_Extent of Soil and Groundwater Contamination Post-2020 Remedial Excavation.dwg F11 Date Exported:10/19/2023 11:05 AM - by Michael R. Woods



**Legend**

- |                             |                 |  |
|-----------------------------|-----------------|--|
| Former Y Pay Mor Cleaners   | Monitoring Well | CVOC Groundwater Plume Boundary (March 2022)                                     |
| SS = Sanitary Sewer Utility | Soil Boring     | CVOC Soil Plume Boundary (Post-2020 Remedial Excavation)                         |
| SD = Stormwater Utility     | Test Pit        | Approximate Groundwater Flow Direction of Shallow Aquifer (variable range shown) |
| W = Water Utility           |                 | Area of 1991 PCE Spills  |
| E = Electrical Utility      |                 |  |
| FO = Fiber Optic Utility    |                 |  |
| T = Telephone Utility       |                 |  |
| G = Gas Utility             |                 |  |

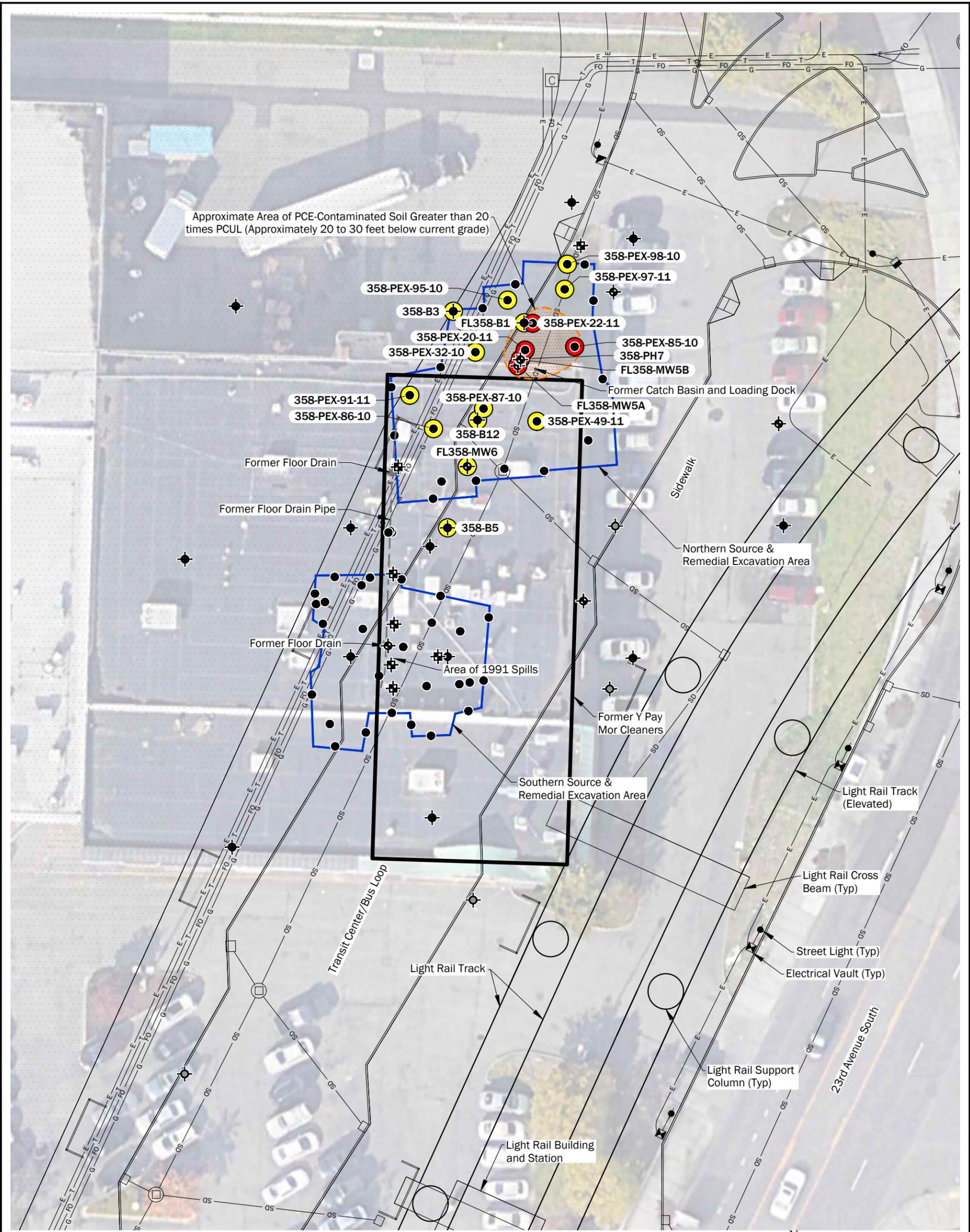


**Notes:**

- The locations of all features shown are approximate.
  - This drawing is for information purposes. It is intended to assist in showing features discussed in an attached document. GeoEngineers, Inc. cannot guarantee the accuracy and content of electronic files. The master file is stored by GeoEngineers, Inc. and will serve as the official record of this communication.
  - PCUL = Preliminary Cleanup Level, CVOC = Chlorinated Volatile Organic Compound, TOD = Transit Oriented Development, PCE = Tetrachloroethene.
- Data Source: Imagery from Google Earth Pro dated 7/1/2018.  
 Design plans S3.15 S07-CDP536, S07-UCP336 dated October 28, 2021 completed by Kiewit/Parsons  
 Projection: Project Datum Washington State Planes, North Zone, US Foot.

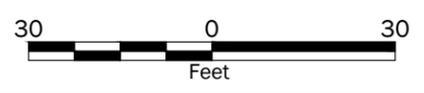
<b>General Extent of Soil and Groundwater Contamination Post - 2020 Remedial Excavation</b>	
Remedial Investigation Y Pay Mor Site Federal Way, Washington	
	<b>Figure 11</b>

\\geoengineers.com\WAN\Projects\4\408203903\CAD\03\FL358\RI\Deliverable\408203903\_F12\_Extent of PCE-Contaminated Soil.dwg F12 Date Exported:10/19/2023 11:06 AM - by Michael R. Woods



**Legend**

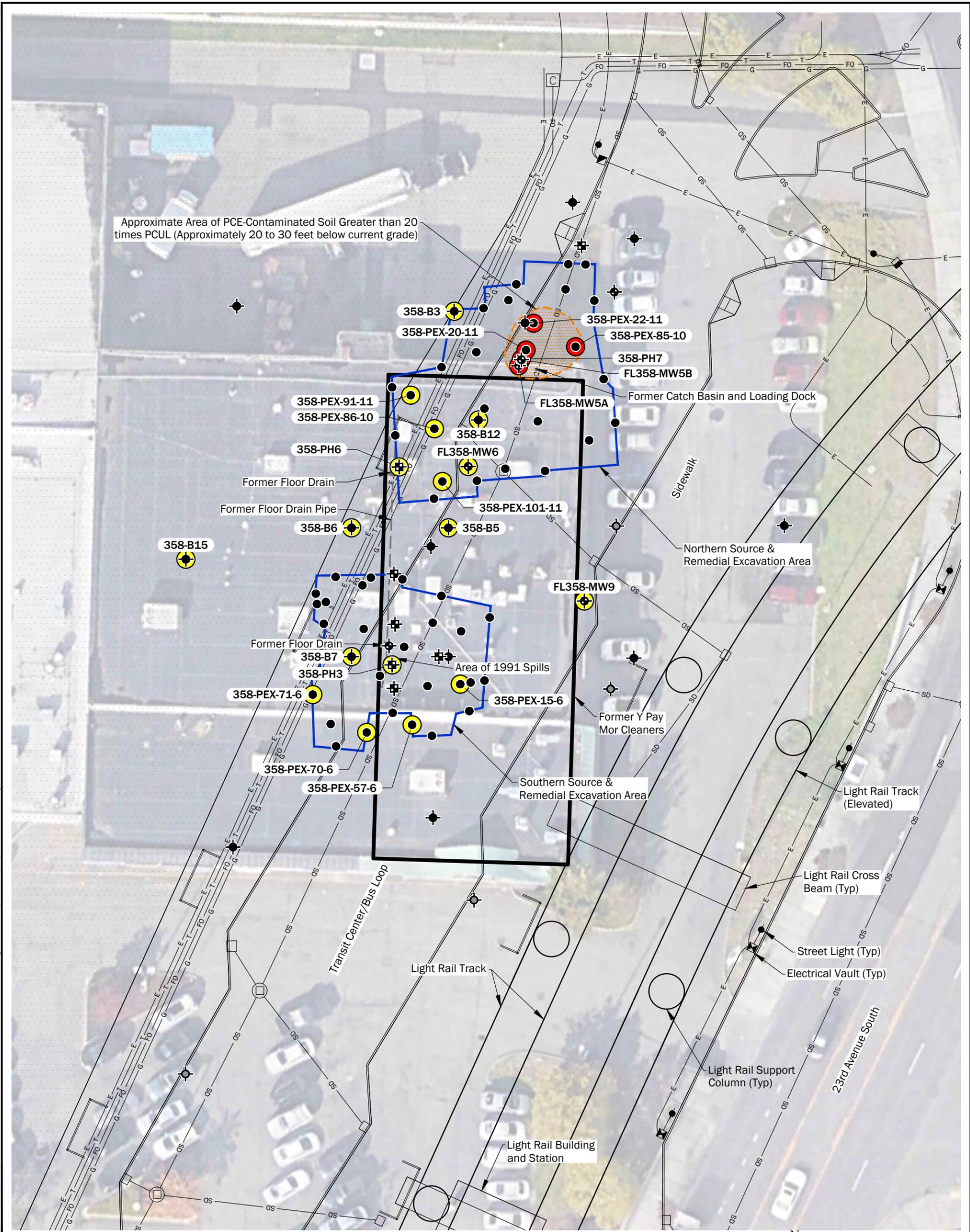
- Former Y Pay Mor Cleaners
- SS = Sanitary Sewer Utility
- SD = Stormwater Utility
- W = Water Utility
- E = Electrical Utility
- FO = Fiber Optic Utility
- T = Telephone Utility
- G = Gas Utility
- Soil Confirmation Sample
- Monitoring Well
- Soil Boring
- Test Pit
- Decommissioned Monitoring Well
- Extent of Interim Action Excavation
- PCE Detected Greater than 20 times the PCUL
- PCE Detected Less than 20 times the PCUL But Greater than the PCUL
- PCE Contaminated Soil Greater than 20 times the PCUL



**Notes:**

1. The locations of all features shown are approximate.
  2. This drawing is for information purposes. It is intended to assist in showing features discussed in an attached document. GeoEngineers, Inc. cannot guarantee the accuracy and content of electronic files. The master file is stored by GeoEngineers, Inc. and will serve as the official record of this communication.
  3. PCUL = Preliminary Cleanup Level, CVOC = Chlorinated Volatile Organic Compound, TOD = Transit Oriented Development, PCE = Tetrachloroethene
- Data Source: Imagery from Google Earth Pro dated 7/1/2018.  
 Design plans S3.15 S07-CDP536, S07-UCP336 dated October 28, 2021 completed by Kiewit/Parsons  
 Projection: Project Datum Washington State Planes, North Zone, US Foot.

<b>Post-Excavation Extent of PCE-Contaminated Soil</b>	
Remedial Investigation Y Pay Mor Site Federal Way, Washington	
	<b>Figure 12</b>



Approximate Area of PCE-Contaminated Soil Greater than 20 times PCUL (Approximately 20 to 30 feet below current grade)

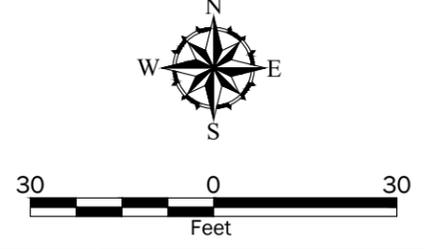
**Legend**

- Former Y Pay Mor Cleaners
- SS = Sanitary Sewer Utility
- SD = Stormwater Utility
- W = Water Utility
- E = Electrical Utility
- FO = Fiber Optic Utility
- T = Telephone Utility
- G = Gas Utility
- Soil Confirmation Sample
- Monitoring Well
- Soil Boring
- Test Pit
- Decommissioned Monitoring Well
- Extent of Interim Action Excavation
- PCE-Breakdown Products Detected Greater than 20 times the PCUL
- PCE-Breakdown Products Detected Less than 20 times the PCUL But Greater than the PCUL
- PCE Contaminated Soil Greater than 20 times the PCUL

**Notes:**

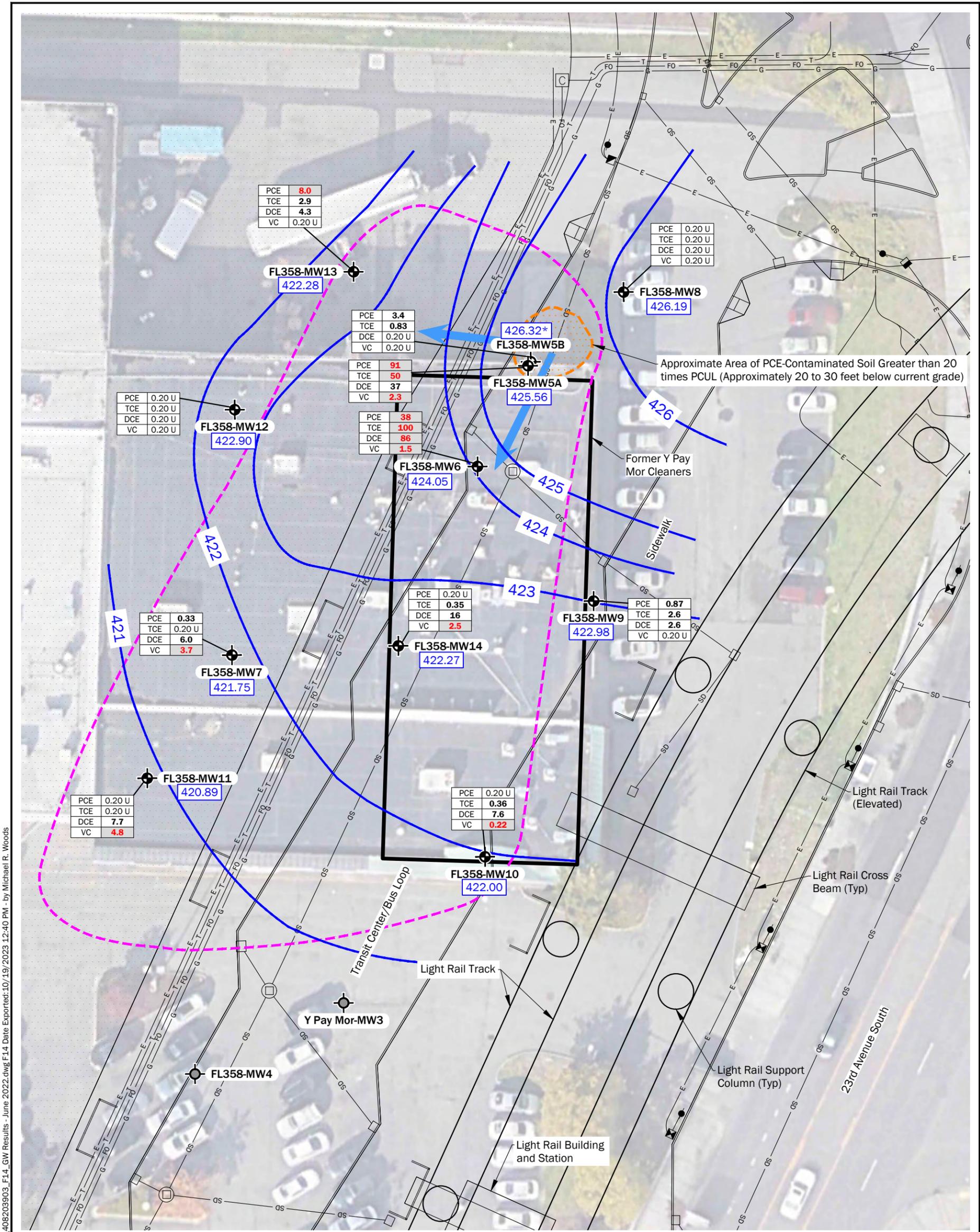
- The locations of all features shown are approximate.
- This drawing is for information purposes. It is intended to assist in showing features discussed in an attached document. GeoEngineers, Inc. cannot guarantee the accuracy and content of electronic files. The master file is stored by GeoEngineers, Inc. and will serve as the official record of this communication.
- PCUL = Preliminary Cleanup Level, CVOC = Chlorinated Volatile Organic Compound, TOD = Transit Oriented Development, PCE = Tetrachloroethene

Data Source: Imagery from Google Earth Pro dated 7/1/2018.  
 Design plans S3.15 S07-CDP536, S07-UCP336 dated October 28, 2021 completed by Kiewit/Parsons  
 Projection: Project Datum Washington State Planes, North Zone, US Foot.



<b>Post-Excavation Extent of PCE-Breakdown Product Contamination in Soil</b>	
Remedial Investigation Y Pay Mor Site Federal Way, Washington	
	<b>Figure 13</b>

\\geoengineers.com\WAW\Projects\4\4082039\CAD\03\FL358\RI\Deliverable\408203903\_F13\_Extent of PCE-Breakdown Product Contamination in Soil.dwg F13 Date Exported:10/19/2023 2:35 PM - by Michael R. Woods



\\geoenr.com\WAW\Projects\4\4082039\3\3\FL358\RI\Deliverable\408203903\_F14\_GW\_Results - June 2022.dwg F14 Date Exported:10/19/2023 12:40 PM - by Michael R. Woods

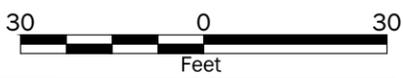
**Legend**

- Former Y Pay Mor Cleaners
- Surplus Property Boundary (Potential TOD) To Remain Unpaved Until Development
- Approximate Area of PCE-Contaminated Soil Greater Than 20 Times PCUL
- CVOC Groundwater Plume Boundary
- 421 Groundwater Elevation Contour
- 422.90 Groundwater Elevation
- Approximate Groundwater Flow Direction of Shallow Aquifer (variable range shown)

Tetrachloroethene =	PCE	<b>0.33</b>
Trichloroethene =	TCE	0.20 U
cis-1,2-Dichloroethene =	DCE	<b>6.0</b>
Vinyl Chloride =	VC	<b>3.7</b>

- Monitoring Well
- Decommissioned Monitoring Well
- SS = Sanitary Sewer utility
- SD = Stormwater Utility
- W = Water Utility
- E = Electrical Utility
- FO = Fiber Optic Utility
- T = Telephone Utility
- G = Gas Utility

"U" indicates the contaminant was not detected  
 Bold text indicates the contaminant was detected  
 Red text with gray shading indicates the contaminant was detected at a concentration greater than PCUL

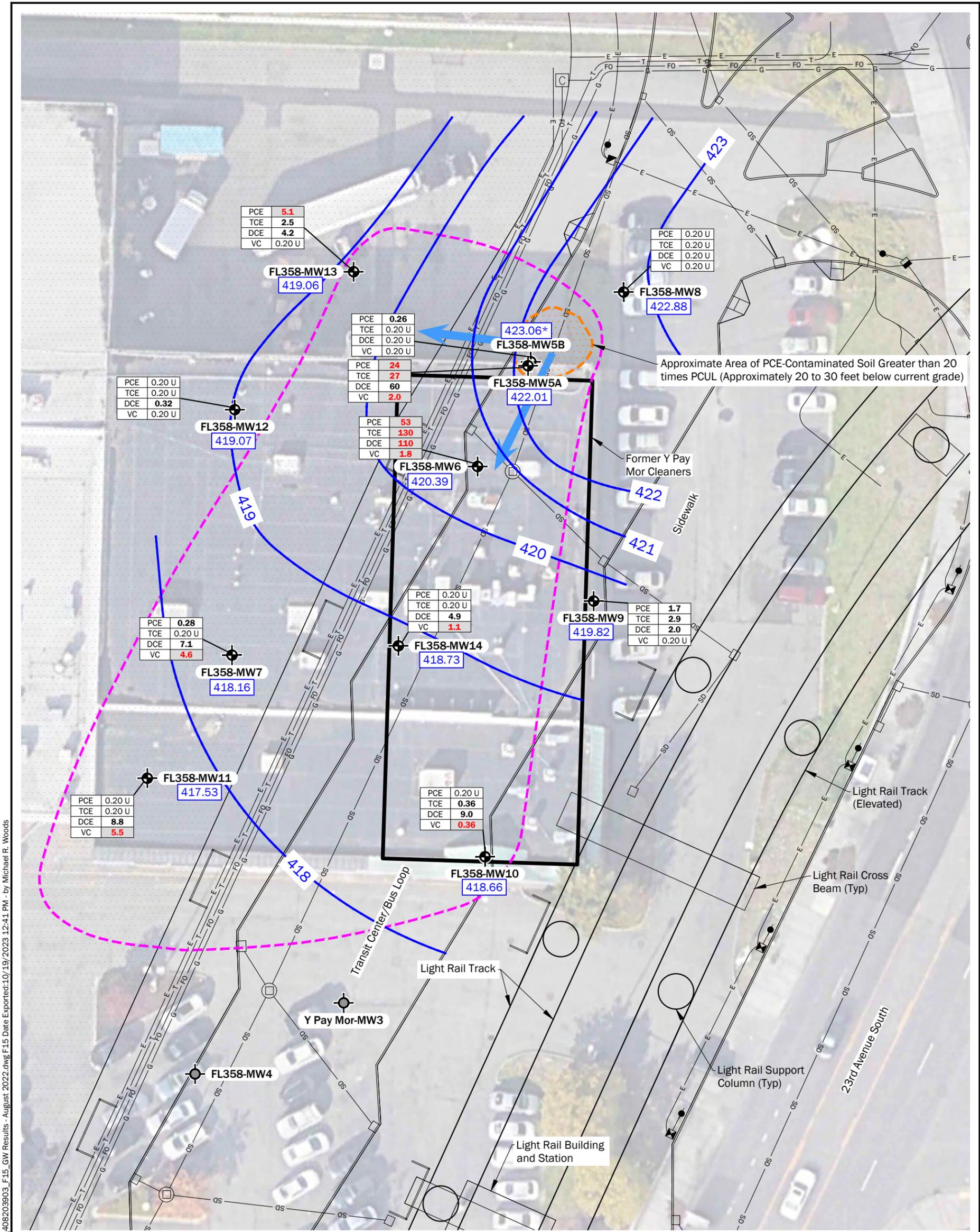


**Notes:**

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- PCUL= Preliminary Cleanup Level, CVOC = Chlorinated Volatile Organic Compound, TOD = Transit Oriented Development

\*Water elevation was not used in groundwater contour map.  
 Data Source: Design plans S3.15 S07-CDP536, S07-UCP336 dated October 28, 2021 completed by Kiewit/Parsons  
 Projection: Project Datum Washington State Planes, North Zone, US Foot.

<b>Groundwater Analytical Results (June 2022)</b>	
Remedial Investigation Y Pay Mor Site Federal Way, Washington	
	<b>Figure 14</b>



\\geoenr.com\WAW\Projects\41408203903\CAD\03\FL358\RI\Deliverable\408203903\_F15\_GW\_Results\_August\_2022.dwg F15 Date Exported:10/19/2023 12:41 PM - by Michael R. Woods

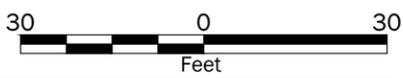
**Legend**

- Former Y Pay Mor Cleaners
- Surplus Property Boundary (Potential TOD) To Remain Unpaved Until Development
- Approximate Area of PCE-Contaminated Soil Greater Than 20 Times PCUL
- CVOC Groundwater Plume Boundary
- Groundwater Elevation Contour
- Groundwater Elevation
- Approximate Groundwater Flow Direction of Shallow Aquifer (variable range shown)

Tetrachloroethene =	PCE	<b>0.33</b>
Trichloroethene =	TCE	0.20 U
cis-1,2-Dichloroethene =	DCE	<b>6.0</b>
Vinyl Chloride =	VC	<b>3.7</b>

- Monitoring Well
- Decommissioned Monitoring Well
- SS = Sanitary Sewer utility
- SD = Stormwater Utility
- W = Water Utility
- E = Electrical Utility
- FO = Fiber Optic Utility
- T = Telephone Utility
- G = Gas Utility

"U" indicates the contaminant was not detected  
 Bold text indicates the contaminant was detected  
 Red text with gray shading indicates the contaminant was detected at a concentration greater than PCUL



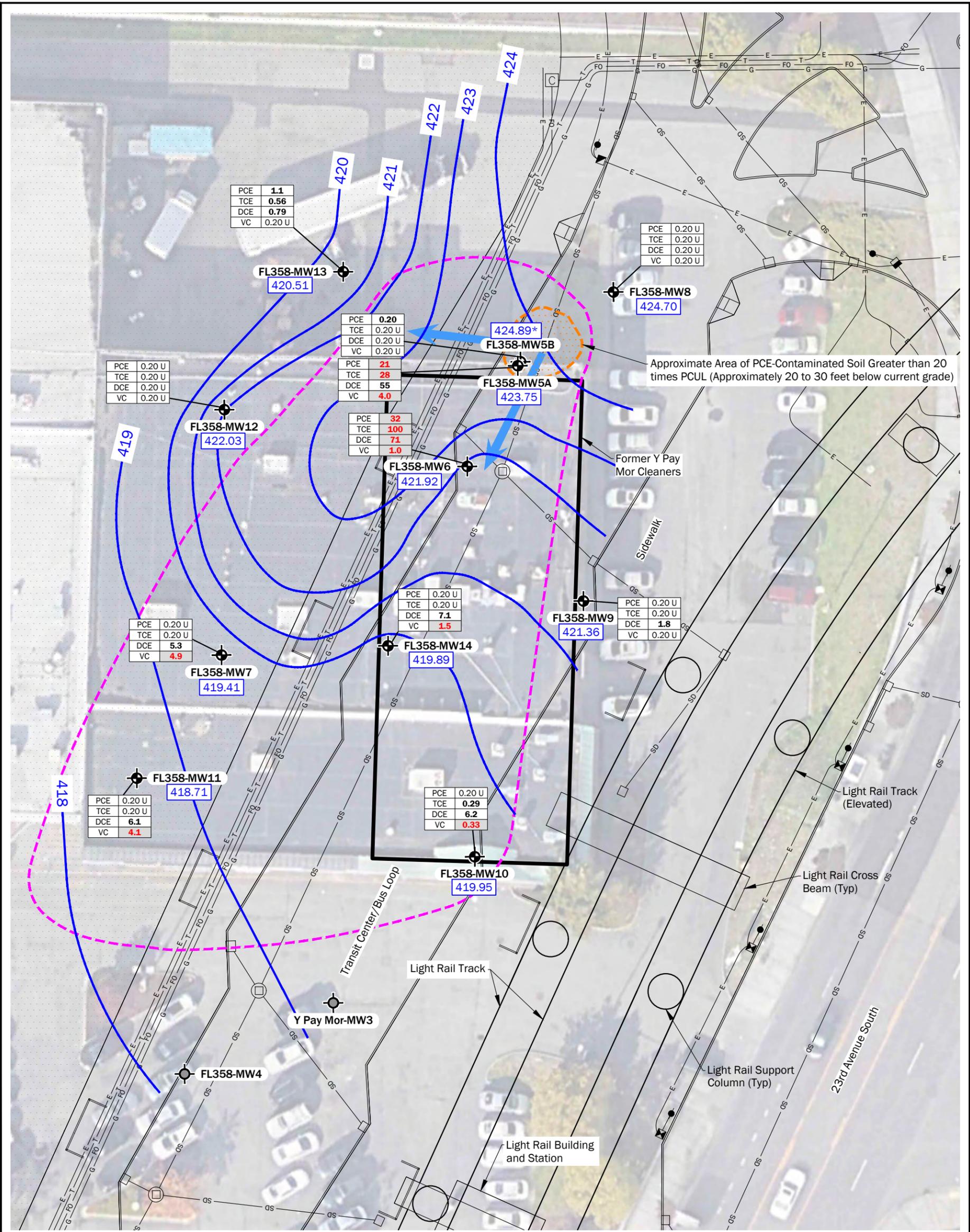
**Notes:**

- The locations of all features shown are approximate.
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- PCUL= Preliminary Cleanup Level, CVOC = Chlorinated Volatile Organic Compound, TOD = Transit Oriented Development

\*Water elevation was not used in groundwater contour map.  
 Data Source: Design plans S3.15 S07-CDP536, S07-UCP336 dated October 28, 2021 completed by Kiewit/Parsons  
 Projection: Project Datum Washington State Planes, North Zone, US Foot.

<b>Groundwater Analytical Results (August 2022)</b>	
Remedial Investigation Y Pay Mor Site Federal Way, Washington	
	<b>Figure 15</b>

\\geoen.com\WAW\Projects\4\408203903\CAD\03\FL358\RI\Deliverable\408203903\_F16\_GW\_Results - November 2022.dwg F16 Date Exported:10/19/2023 12:44 PM - by Michael R. Woods



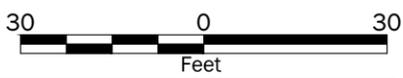
**Legend**

- Former Y Pay Mor Cleaners
- Surplus Property Boundary (Potential TOD) To Remain Unpaved Until Development
- Approximate Area of PCE-Contaminated Soil Greater Than 20 Times PCUL
- CVOC Groundwater Plume Boundary
- Groundwater Elevation Contour
- Groundwater Elevation
- Approximate Groundwater Flow Direction of Shallow Aquifer (variable range shown)

Tetrachloroethene =	PCE	<b>0.33</b>
Trichloroethene =	TCE	0.20 U
cis-1,2-Dichloroethene =	DCE	<b>6.0</b>
Vinyl Chloride =	VC	<b>3.7</b>

- Monitoring Well
- Decommissioned Monitoring Well
- SS = Sanitary Sewer utility
- SD = Stormwater Utility
- W = Water Utility
- E = Electrical Utility
- FO = Fiber Optic Utility
- T = Telephone Utility
- G = Gas Utility

"U" indicates the contaminant was not detected  
 Bold text indicates the contaminant was detected  
 Red text with gray shading indicates the contaminant was detected at a concentration greater than PCUL



**Notes:**

- The locations of all features shown are approximate.
- This drawing is for information purposes. It is intended to assist in showing features discussed in an attached document. GeoEngineers, Inc. cannot guarantee the accuracy and content of electronic files. The master file is stored by GeoEngineers, Inc. and will serve as the official record of this communication.
- PCUL= Preliminary Cleanup Level, CVOC = Chlorinated Volatile Organic Compound, TOD = Transit Oriented Development

\*Water elevation was not used in groundwater contour map.  
 Data Source: Design plans S3.15 S07-CDP536, S07-UCP336 dated October 28, 2021 completed by Kiewit/Parsons  
 Projection: Project Datum Washington State Planes, North Zone, US Foot.

<b>Groundwater Analytical Results (November 2022)</b>	
Remedial Investigation Y Pay Mor Site Federal Way, Washington	
	<b>Figure 16</b>



**APPENDIX A**  
**Dewatering Vault Analytical Data**

## ANALYTICAL REPORT

Eurofins Seattle  
5755 8th Street East  
Tacoma, WA 98424  
Tel: (253)922-2310

Laboratory Job ID: 580-115391-1

Client Project/Site: Federal Way Link Extension\_06/30/2022  
FWTC Pond

**For:**

Kiewit Infrastructure West Co.  
2505 S 320th Street  
Federal Way, Washington 98003

Attn: Emma Temples



Authorized for release by:  
7/1/2022 9:52:15 PM

Pauline Matlock, Project Manager  
(253)922-2310  
[Pauline.Matlock@et.eurofinsus.com](mailto:Pauline.Matlock@et.eurofinsus.com)

### LINKS

Review your project  
results through



Have a Question?



Visit us at:

[www.eurofinsus.com/Env](http://www.eurofinsus.com/Env)

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.



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# Case Narrative

Client: Kiewit Infrastructure West Co.  
Project/Site: Federal Way Link Extension\_06/30/2022 FWTC Pond

Job ID: 580-115391-1

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## Job ID: 580-115391-1

---

### Laboratory: Eurofins Seattle

#### Narrative

#### Job Narrative 580-115391-1

#### Comments

No additional comments.

#### Receipt

The sample was received on 6/30/2022 9:38 AM. Unless otherwise noted below, the sample arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 15.3° C.

#### GC/MS VOA

Method 8260D: The CCV for analytical batch 580-395525 recovered outside control limits for the following analyte(s): Acetone. Acetone has been identified as a poor performing analyte when analyzed using this method; therefore, re-extraction/re-analysis was not performed. These results have been reported and qualified.

Method 8260D: The method blank for analytical batch 580-395525 contained 1,2,4-Trichlorobenzene, 1,3,5-Trimethylbenzene, Ethylbenzene, Isopropylbenzene, o-Xylene and Xylenes, Total above the method detection limit. This target analyte concentration was less than the reporting limit (RL); therefore, re-extraction and/or re-analysis of samples was not performed.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

#### GC/MS Semi VOA

Method 8270E SIM: The RPD of the laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) for preparation batch 590-36841 and analytical batch 590-36846 recovered outside control limits for the following analytes: Benzo[b]fluoranthene.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

#### GC Semi VOA

Method NWTPH-Dx: Surrogate recovery for the following sample was outside acceptance limits: (MB 580-395658/1-B). The results have been reported per client request.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

#### Metals

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

#### Organic Prep

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

#### VOA Prep

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

# Definitions/Glossary

Client: Kiewit Infrastructure West Co.  
Project/Site: Federal Way Link Extension\_06/30/2022 FWTC  
Pond

Job ID: 580-115391-1

## Qualifiers

### GC/MS VOA

Qualifier	Qualifier Description
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

### GC/MS Semi VOA

Qualifier	Qualifier Description
*1	LCS/LCSD RPD exceeds control limits.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

### GC Semi VOA

Qualifier	Qualifier Description
S1-	Surrogate recovery exceeds control limits, low biased.

## Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

# Client Sample Results

Client: Kiewit Infrastructure West Co.  
 Project/Site: Federal Way Link Extension\_06/30/2022 FWTC  
 Pond

Job ID: 580-115391-1

**Client Sample ID: FWTC Pond-Raw**

**Lab Sample ID: 580-115391-1**

Date Collected: 06/30/22 07:15

Matrix: Water

Date Received: 06/30/22 09:38

## Method: 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		0.50	0.17	ug/L			06/30/22 15:21	1
<b>1,2,4-Trimethylbenzene</b>	<b>0.99</b>		0.50	0.20	ug/L			06/30/22 15:21	1
<b>1,3,5-Trimethylbenzene</b>	<b>0.32</b>	<b>J B</b>	0.50	0.15	ug/L			06/30/22 15:21	1
1,4-Dichlorobenzene	ND		0.30	0.050	ug/L			06/30/22 15:21	1
<b>2-Butanone (MEK)</b>	<b>25</b>		10	2.5	ug/L			06/30/22 15:21	1
<b>4-Isopropyltoluene</b>	<b>0.17</b>	<b>J</b>	0.50	0.15	ug/L			06/30/22 15:21	1
<b>Acetone</b>	<b>22</b>		10	3.1	ug/L			06/30/22 15:21	1
<b>Benzene</b>	<b>0.058</b>	<b>J</b>	0.20	0.030	ug/L			06/30/22 15:21	1
Carbon disulfide	ND		0.30	0.083	ug/L			06/30/22 15:21	1
Chlorobenzene	ND		0.20	0.060	ug/L			06/30/22 15:21	1
cis-1,2-Dichloroethene	ND		0.20	0.055	ug/L			06/30/22 15:21	1
<b>Ethylbenzene</b>	<b>1.1</b>	<b>B</b>	0.20	0.030	ug/L			06/30/22 15:21	1
<b>Isopropylbenzene</b>	<b>0.39</b>	<b>J B</b>	1.0	0.19	ug/L			06/30/22 15:21	1
<b>m-Xylene &amp; p-Xylene</b>	<b>0.86</b>		0.50	0.12	ug/L			06/30/22 15:21	1
n-Butylbenzene	ND		1.0	0.23	ug/L			06/30/22 15:21	1
<b>N-Propylbenzene</b>	<b>0.73</b>		0.30	0.091	ug/L			06/30/22 15:21	1
<b>o-Xylene</b>	<b>0.25</b>	<b>J B</b>	0.50	0.15	ug/L			06/30/22 15:21	1
sec-Butylbenzene	ND		1.0	0.17	ug/L			06/30/22 15:21	1
tert-Butylbenzene	ND		0.50	0.26	ug/L			06/30/22 15:21	1
Tetrachloroethene	ND		0.50	0.084	ug/L			06/30/22 15:21	1
Toluene	ND		0.20	0.050	ug/L			06/30/22 15:21	1
Trichloroethene	ND		0.20	0.066	ug/L			06/30/22 15:21	1
Vinyl chloride	ND		0.020	0.013	ug/L			06/30/22 15:21	1
<b>Xylenes, Total</b>	<b>1.1</b>	<b>B</b>	0.50	0.15	ug/L			06/30/22 15:21	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	104		80 - 120		06/30/22 15:21	1
4-Bromofluorobenzene (Surr)	110		80 - 120		06/30/22 15:21	1
Dibromofluoromethane (Surr)	106		80 - 120		06/30/22 15:21	1
Toluene-d8 (Surr)	96		80 - 120		06/30/22 15:21	1

## Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	ND		50	14	ug/L			06/30/22 20:25	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	94		77 - 123		06/30/22 20:25	1

## Method: 8270E SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Acenaphthene</b>	<b>0.16</b>	<b>J</b>	0.31	0.068	ug/L		07/01/22 15:42	07/01/22 16:20	1
Anthracene	ND		0.31	0.078	ug/L		07/01/22 15:42	07/01/22 16:20	1
Benzo[a]anthracene	ND		0.31	0.037	ug/L		07/01/22 15:42	07/01/22 16:20	1
Benzo[a]pyrene	ND		0.31	0.037	ug/L		07/01/22 15:42	07/01/22 16:20	1
Benzo[b]fluoranthene	ND	*1	0.31	0.078	ug/L		07/01/22 15:42	07/01/22 16:20	1
Benzo[g,h,i]perylene	ND		0.31	0.065	ug/L		07/01/22 15:42	07/01/22 16:20	1
Chrysene	ND		0.31	0.031	ug/L		07/01/22 15:42	07/01/22 16:20	1
Fluoranthene	ND		0.31	0.053	ug/L		07/01/22 15:42	07/01/22 16:20	1
Fluorene	ND		0.31	0.050	ug/L		07/01/22 15:42	07/01/22 16:20	1

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# Client Sample Results

Client: Kiewit Infrastructure West Co.  
 Project/Site: Federal Way Link Extension\_06/30/2022 FWTC  
 Pond

Job ID: 580-115391-1

**Client Sample ID: FWTC Pond-Raw**

**Lab Sample ID: 580-115391-1**

Date Collected: 06/30/22 07:15

Matrix: Water

Date Received: 06/30/22 09:38

**Method: 8270E SIM - Semivolatile Organic Compounds (GC/MS SIM) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1-Methylnaphthalene	0.32		0.31	0.071	ug/L		07/01/22 15:42	07/01/22 16:20	1
2-Methylnaphthalene	0.38		0.31	0.13	ug/L		07/01/22 15:42	07/01/22 16:20	1
Naphthalene	0.59		0.31	0.16	ug/L		07/01/22 15:42	07/01/22 16:20	1
Phenanthrene	ND		0.31	0.17	ug/L		07/01/22 15:42	07/01/22 16:20	1
Pyrene	ND		0.31	0.081	ug/L		07/01/22 15:42	07/01/22 16:20	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Nitrobenzene-d5 (Surr)	69		42 - 121	07/01/22 15:42	07/01/22 16:20	1

**Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	300		110	65	ug/L		07/01/22 09:41	07/01/22 18:37	1
Motor Oil (>C24-C36)	500		350	96	ug/L		07/01/22 09:41	07/01/22 18:37	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
o-Terphenyl	63		50 - 150	07/01/22 09:41	07/01/22 18:37	1

**Method: NWTPH-Dx - Semi-Volatile Petroleum Products by NWTPH with Silica Gel Cleanup**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	ND		110	65	ug/L		07/01/22 09:41	07/01/22 19:56	1
Motor Oil (>C24-C36)	ND		350	96	ug/L		07/01/22 09:41	07/01/22 19:56	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
o-Terphenyl	63		50 - 150	07/01/22 09:41	07/01/22 19:56	1

**Method: 200.8 - Metals (ICP/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	12		1.0	0.20	ug/L		06/30/22 19:11	07/01/22 10:57	1
Chromium	6.0		0.80	0.17	ug/L		06/30/22 19:11	07/01/22 10:57	1
Lead	0.73		0.40	0.040	ug/L		06/30/22 19:11	07/01/22 10:57	1

# QC Sample Results

Client: Kiewit Infrastructure West Co.  
 Project/Site: Federal Way Link Extension\_06/30/2022 FWTC  
 Pond

Job ID: 580-115391-1

## Method: 8260D - Volatile Organic Compounds by GC/MS

**Lab Sample ID: MB 580-395525/7**  
**Matrix: Water**  
**Analysis Batch: 395525**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	0.197	J	0.50	0.17	ug/L	-		06/30/22 14:56	1
1,2,4-Trimethylbenzene	ND		0.50	0.20	ug/L			06/30/22 14:56	1
1,3,5-Trimethylbenzene	0.153	J	0.50	0.15	ug/L			06/30/22 14:56	1
1,4-Dichlorobenzene	ND		0.30	0.050	ug/L			06/30/22 14:56	1
2-Butanone (MEK)	ND		10	2.5	ug/L			06/30/22 14:56	1
4-Isopropyltoluene	ND		0.50	0.15	ug/L			06/30/22 14:56	1
Acetone	ND		10	3.1	ug/L			06/30/22 14:56	1
Benzene	ND		0.20	0.030	ug/L			06/30/22 14:56	1
Carbon disulfide	ND		0.30	0.083	ug/L			06/30/22 14:56	1
Chlorobenzene	ND		0.20	0.060	ug/L			06/30/22 14:56	1
cis-1,2-Dichloroethene	ND		0.20	0.055	ug/L			06/30/22 14:56	1
Ethylbenzene	0.0813	J	0.20	0.030	ug/L			06/30/22 14:56	1
Isopropylbenzene	0.264	J	1.0	0.19	ug/L			06/30/22 14:56	1
m-Xylene & p-Xylene	ND		0.50	0.12	ug/L			06/30/22 14:56	1
n-Butylbenzene	ND		1.0	0.23	ug/L			06/30/22 14:56	1
N-Propylbenzene	ND		0.30	0.091	ug/L			06/30/22 14:56	1
o-Xylene	0.205	J	0.50	0.15	ug/L			06/30/22 14:56	1
sec-Butylbenzene	ND		1.0	0.17	ug/L			06/30/22 14:56	1
tert-Butylbenzene	ND		0.50	0.26	ug/L			06/30/22 14:56	1
Tetrachloroethene	ND		0.50	0.084	ug/L			06/30/22 14:56	1
Toluene	ND		0.20	0.050	ug/L			06/30/22 14:56	1
Trichloroethene	ND		0.20	0.066	ug/L			06/30/22 14:56	1
Vinyl chloride	ND		0.020	0.013	ug/L			06/30/22 14:56	1
Xylenes, Total	0.205	J	0.50	0.15	ug/L			06/30/22 14:56	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	102		80 - 120		06/30/22 14:56	1
4-Bromofluorobenzene (Surr)	100		80 - 120		06/30/22 14:56	1
Dibromofluoromethane (Surr)	104		80 - 120		06/30/22 14:56	1
Toluene-d8 (Surr)	96		80 - 120		06/30/22 14:56	1

**Lab Sample ID: LCS 580-395525/4**  
**Matrix: Water**  
**Analysis Batch: 395525**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
1,2,4-Trichlorobenzene	5.00	4.83		ug/L		97	60 - 130
1,2,4-Trimethylbenzene	5.00	4.98		ug/L		100	71 - 127
1,3,5-Trimethylbenzene	5.00	4.40		ug/L		88	75 - 123
1,4-Dichlorobenzene	5.00	4.51		ug/L		90	71 - 129
2-Butanone (MEK)	25.0	24.2		ug/L		97	37 - 150
4-Isopropyltoluene	5.00	4.79		ug/L		96	78 - 125
Acetone	25.0	30.8		ug/L		123	49 - 150
Benzene	5.00	5.04		ug/L		101	80 - 120
Carbon disulfide	5.00	5.68		ug/L		114	54 - 142
Chlorobenzene	5.00	4.75		ug/L		95	74 - 123
cis-1,2-Dichloroethene	5.00	5.19		ug/L		104	72 - 120

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# QC Sample Results

Client: Kiewit Infrastructure West Co.  
 Project/Site: Federal Way Link Extension\_06/30/2022 FWTC  
 Pond

Job ID: 580-115391-1

## Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

**Lab Sample ID: LCS 580-395525/4**  
**Matrix: Water**  
**Analysis Batch: 395525**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Ethylbenzene	5.00	4.76		ug/L		95	80 - 124
Isopropylbenzene	5.00	4.57		ug/L		91	71 - 123
m-Xylene & p-Xylene	5.00	4.99		ug/L		100	75 - 124
n-Butylbenzene	5.00	4.60		ug/L		92	69 - 127
N-Propylbenzene	5.00	4.98		ug/L		100	72 - 126
o-Xylene	5.00	4.95		ug/L		99	71 - 124
sec-Butylbenzene	5.00	5.02		ug/L		100	75 - 126
tert-Butylbenzene	5.00	4.99		ug/L		100	70 - 129
Tetrachloroethene	5.00	4.79		ug/L		96	75 - 124
Toluene	5.00	4.85		ug/L		97	80 - 126
Trichloroethene	5.00	4.60		ug/L		92	72 - 120
Vinyl chloride	5.00	4.41		ug/L		88	41 - 150
Xylenes, Total	10.0	9.94		ug/L		99	73 - 123

Surrogate	LCS LCS		Limits
	%Recovery	Qualifier	
1,2-Dichloroethane-d4 (Surr)	95		80 - 120
4-Bromofluorobenzene (Surr)	107		80 - 120
Dibromofluoromethane (Surr)	99		80 - 120
Toluene-d8 (Surr)	100		80 - 120

**Lab Sample ID: LCSD 580-395525/5**  
**Matrix: Water**  
**Analysis Batch: 395525**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total/NA**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
1,2,4-Trichlorobenzene	5.00	4.93		ug/L		99	60 - 130	2	26
1,2,4-Trimethylbenzene	5.00	5.28		ug/L		106	71 - 127	6	23
1,3,5-Trimethylbenzene	5.00	4.67		ug/L		93	75 - 123	6	23
1,4-Dichlorobenzene	5.00	4.71		ug/L		94	71 - 129	4	22
2-Butanone (MEK)	25.0	24.5		ug/L		98	37 - 150	1	35
4-Isopropyltoluene	5.00	5.06		ug/L		101	78 - 125	5	24
Acetone	25.0	30.7		ug/L		123	49 - 150	0	24
Benzene	5.00	5.22		ug/L		104	80 - 120	3	22
Carbon disulfide	5.00	5.78		ug/L		116	54 - 142	2	34
Chlorobenzene	5.00	4.88		ug/L		98	74 - 123	3	21
cis-1,2-Dichloroethene	5.00	5.29		ug/L		106	72 - 120	2	22
Ethylbenzene	5.00	4.90		ug/L		98	80 - 124	3	22
Isopropylbenzene	5.00	4.73		ug/L		95	71 - 123	3	23
m-Xylene & p-Xylene	5.00	5.20		ug/L		104	75 - 124	4	22
n-Butylbenzene	5.00	4.88		ug/L		98	69 - 127	6	24
N-Propylbenzene	5.00	5.26		ug/L		105	72 - 126	6	20
o-Xylene	5.00	5.08		ug/L		102	71 - 124	3	23
sec-Butylbenzene	5.00	5.38		ug/L		108	75 - 126	7	23
tert-Butylbenzene	5.00	5.36		ug/L		107	70 - 129	7	24
Tetrachloroethene	5.00	4.95		ug/L		99	75 - 124	3	20
Toluene	5.00	5.09		ug/L		102	80 - 126	5	20
Trichloroethene	5.00	4.77		ug/L		95	72 - 120	4	22

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# QC Sample Results

Client: Kiewit Infrastructure West Co.  
 Project/Site: Federal Way Link Extension\_06/30/2022 FWTC  
 Pond

Job ID: 580-115391-1

## Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

**Lab Sample ID: LCSD 580-395525/5**  
**Matrix: Water**  
**Analysis Batch: 395525**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total/NA**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Vinyl chloride	5.00	4.47		ug/L		89	41 - 150	1	32
Xylenes, Total	10.0	10.3		ug/L		103	73 - 123	3	20

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	94		80 - 120
4-Bromofluorobenzene (Surr)	105		80 - 120
Dibromofluoromethane (Surr)	99		80 - 120
Toluene-d8 (Surr)	101		80 - 120

## Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC/MS)

**Lab Sample ID: MB 580-395465/7**  
**Matrix: Water**  
**Analysis Batch: 395465**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	ND		50	14	ug/L			06/30/22 11:27	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	91		77 - 123		06/30/22 11:27	1

**Lab Sample ID: LCS 580-395465/8**  
**Matrix: Water**  
**Analysis Batch: 395465**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline	1000	1010		ug/L		101	55 - 148

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	96		77 - 123

**Lab Sample ID: LCSD 580-395465/9**  
**Matrix: Water**  
**Analysis Batch: 395465**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total/NA**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline	1000	1030		ug/L		103	55 - 148	2	10

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	94		77 - 123

# QC Sample Results

Client: Kiewit Infrastructure West Co.  
 Project/Site: Federal Way Link Extension\_06/30/2022 FWTC  
 Pond

Job ID: 580-115391-1

## Method: 8270E SIM - Semivolatile Organic Compounds (GC/MS SIM)

**Lab Sample ID: MB 590-36841/1-A**  
**Matrix: Water**  
**Analysis Batch: 36846**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 36841**

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Acenaphthene	ND		0.40	0.088	ug/L		07/01/22 08:45	07/01/22 15:10	1
Anthracene	ND		0.40	0.10	ug/L		07/01/22 08:45	07/01/22 15:10	1
Benzo[a]anthracene	ND		0.40	0.048	ug/L		07/01/22 08:45	07/01/22 15:10	1
Benzo[a]pyrene	ND		0.40	0.048	ug/L		07/01/22 08:45	07/01/22 15:10	1
Benzo[b]fluoranthene	ND		0.40	0.10	ug/L		07/01/22 08:45	07/01/22 15:10	1
Benzo[g,h,i]perylene	ND		0.40	0.084	ug/L		07/01/22 08:45	07/01/22 15:10	1
Chrysene	ND		0.40	0.040	ug/L		07/01/22 08:45	07/01/22 15:10	1
Fluoranthene	ND		0.40	0.068	ug/L		07/01/22 08:45	07/01/22 15:10	1
Fluorene	ND		0.40	0.064	ug/L		07/01/22 08:45	07/01/22 15:10	1
1-Methylnaphthalene	ND		0.40	0.092	ug/L		07/01/22 08:45	07/01/22 15:10	1
2-Methylnaphthalene	ND		0.40	0.17	ug/L		07/01/22 08:45	07/01/22 15:10	1
Naphthalene	ND		0.40	0.21	ug/L		07/01/22 08:45	07/01/22 15:10	1
Phenanthrene	ND		0.40	0.22	ug/L		07/01/22 08:45	07/01/22 15:10	1
Pyrene	ND		0.40	0.10	ug/L		07/01/22 08:45	07/01/22 15:10	1

Surrogate	MB	MB	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
Nitrobenzene-d5 (Surr)	79		42 - 121	07/01/22 08:45	07/01/22 15:10	1

**Lab Sample ID: LCS 590-36841/2-A**  
**Matrix: Water**  
**Analysis Batch: 36846**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 36841**

Analyte	Spike Added	LCS	LCS	Unit	D	%Rec	%Rec Limits
		Result	Qualifier				
Acenaphthene	1.60	1.25		ug/L		78	54 - 120
Anthracene	1.60	1.46		ug/L		91	59 - 120
Benzo[a]anthracene	1.60	1.58		ug/L		99	60 - 120
Benzo[a]pyrene	1.60	1.59		ug/L		99	54 - 120
Benzo[b]fluoranthene	1.60	1.48		ug/L		92	51 - 125
Benzo[g,h,i]perylene	1.60	1.57		ug/L		98	55 - 120
Chrysene	1.60	1.51		ug/L		95	58 - 126
Fluoranthene	1.60	1.46		ug/L		92	61 - 120
Fluorene	1.60	1.38		ug/L		86	53 - 120
1-Methylnaphthalene	1.60	1.12		ug/L		70	49 - 120
2-Methylnaphthalene	1.60	1.09		ug/L		68	44 - 120
Naphthalene	1.60	1.17		ug/L		73	52 - 120
Phenanthrene	1.60	1.46		ug/L		91	55 - 120
Pyrene	1.60	1.64		ug/L		103	61 - 126

Surrogate	LCS	LCS	Limits
	%Recovery	Qualifier	
Nitrobenzene-d5 (Surr)	77		42 - 121

**Lab Sample ID: LCSD 590-36841/3-A**  
**Matrix: Water**  
**Analysis Batch: 36846**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total/NA**  
**Prep Batch: 36841**

Analyte	Spike Added	LCSD	LCSD	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
		Result	Qualifier						
Acenaphthene	1.60	1.33		ug/L		83	54 - 120	6	15

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# QC Sample Results

Client: Kiewit Infrastructure West Co.  
 Project/Site: Federal Way Link Extension\_06/30/2022 FWTC  
 Pond

Job ID: 580-115391-1

## Method: 8270E SIM - Semivolatile Organic Compounds (GC/MS SIM) (Continued)

**Lab Sample ID: LCSD 590-36841/3-A**  
**Matrix: Water**  
**Analysis Batch: 36846**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total/NA**  
**Prep Batch: 36841**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec		RPD	Limit
							Limits	RPD		
Anthracene	1.60	1.45		ug/L		91	59 - 120	0	15	
Benzo[a]anthracene	1.60	1.60		ug/L		100	60 - 120	1	15	
Benzo[a]pyrene	1.60	1.64		ug/L		102	54 - 120	3	15	
Benzo[b]fluoranthene	1.60	1.80	*1	ug/L		112	51 - 125	19	15	
Benzo[g,h,i]perylene	1.60	1.62		ug/L		101	55 - 120	3	17	
Chrysene	1.60	1.58		ug/L		99	58 - 126	5	15	
Fluoranthene	1.60	1.51		ug/L		94	61 - 120	3	15	
Fluorene	1.60	1.43		ug/L		89	53 - 120	3	15	
1-Methylnaphthalene	1.60	1.26		ug/L		79	49 - 120	12	15	
2-Methylnaphthalene	1.60	1.24		ug/L		77	44 - 120	13	16	
Naphthalene	1.60	1.27		ug/L		80	52 - 120	9	21	
Phenanthrene	1.60	1.51		ug/L		94	55 - 120	3	16	
Pyrene	1.60	1.66		ug/L		104	61 - 126	1	15	

Surrogate	LCSD %Recovery	LCSD Qualifier	LCSD Limits
Nitrobenzene-d5 (Surr)	76		42 - 121

## Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

**Lab Sample ID: MB 580-395658/1-A**  
**Matrix: Water**  
**Analysis Batch: 395629**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 395658**

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
#2 Diesel (C10-C24)	ND		110	65	ug/L		07/01/22 09:41	07/01/22 17:19	1
Motor Oil (>C24-C36)	ND		350	96	ug/L		07/01/22 09:41	07/01/22 17:19	1

**Lab Sample ID: LCS 580-395658/2-A**  
**Matrix: Water**  
**Analysis Batch: 395629**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 395658**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec	
							Limits	RPD
#2 Diesel (C10-C24)	4000	3010		ug/L		75	50 - 120	
Motor Oil (>C24-C36)	4000	3610		ug/L		90	64 - 120	

Surrogate	LCS %Recovery	LCS Qualifier	LCS Limits
o-Terphenyl	88		50 - 150

**Lab Sample ID: LCSD 580-395658/3-A**  
**Matrix: Water**  
**Analysis Batch: 395629**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total/NA**  
**Prep Batch: 395658**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec		RPD	Limit
							Limits	RPD		
#2 Diesel (C10-C24)	4000	2700		ug/L		68	50 - 120	11	26	
Motor Oil (>C24-C36)	4000	3260		ug/L		81	64 - 120	10	24	

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# QC Sample Results

Client: Kiewit Infrastructure West Co.  
 Project/Site: Federal Way Link Extension\_06/30/2022 FWTC  
 Pond

Job ID: 580-115391-1

## Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC) (Continued)

**Lab Sample ID: LCSD 580-395658/3-A**  
**Matrix: Water**  
**Analysis Batch: 395629**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total/NA**  
**Prep Batch: 395658**

Surrogate	LCSD		Limits
	%Recovery	Qualifier	
<i>o</i> -Terphenyl	82		50 - 150

## Method: NWTPH-Dx - Semi-Volatile Petroleum Products by NWTPH with Silica Gel Cleanup

**Lab Sample ID: MB 580-395658/1-B**  
**Matrix: Water**  
**Analysis Batch: 395629**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 395658**

Analyte	MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
#2 Diesel (C10-C24)	ND		110	65	ug/L		07/01/22 09:41	07/01/22 18:57	1
Motor Oil (>C24-C36)	ND		350	96	ug/L		07/01/22 09:41	07/01/22 18:57	1

Surrogate	MB		Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
<i>o</i> -Terphenyl	32	S1-	50 - 150	07/01/22 09:41	07/01/22 18:57	1

**Lab Sample ID: LCS 580-395658/2-B**  
**Matrix: Water**  
**Analysis Batch: 395629**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 395658**

Analyte	Spike Added	LCS		Unit	D	%Rec	%Rec Limits
		Result	Qualifier				
#2 Diesel (C10-C24)	4000	3210		ug/L		80	50 - 120
Motor Oil (>C24-C36)	4000	4010		ug/L		100	64 - 120

Surrogate	LCS		Limits
	%Recovery	Qualifier	
<i>o</i> -Terphenyl	93		50 - 150

**Lab Sample ID: LCSD 580-395658/3-B**  
**Matrix: Water**  
**Analysis Batch: 395629**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total/NA**  
**Prep Batch: 395658**

Analyte	Spike Added	LCSD		Unit	D	%Rec	%Rec Limits	RPD	Limit
		Result	Qualifier						
#2 Diesel (C10-C24)	4000	3000		ug/L		75	50 - 120	7	26
Motor Oil (>C24-C36)	4000	3850		ug/L		96	64 - 120	4	24

Surrogate	LCSD		Limits
	%Recovery	Qualifier	
<i>o</i> -Terphenyl	90		50 - 150

## Method: 200.8 - Metals (ICP/MS)

**Lab Sample ID: MB 580-395611/13-A**  
**Matrix: Water**  
**Analysis Batch: 395687**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 395611**

Analyte	MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Arsenic	ND		1.0	0.20	ug/L		06/30/22 19:11	07/01/22 10:53	1
Chromium	ND		0.80	0.17	ug/L		06/30/22 19:11	07/01/22 10:53	1
Lead	ND		0.40	0.040	ug/L		06/30/22 19:11	07/01/22 10:53	1

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# QC Sample Results

Client: Kiewit Infrastructure West Co.  
 Project/Site: Federal Way Link Extension\_06/30/2022 FWTC  
 Pond

Job ID: 580-115391-1

## Method: 200.8 - Metals (ICP/MS) (Continued)

**Lab Sample ID: LCS 580-395611/14-A**  
**Matrix: Water**  
**Analysis Batch: 395687**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 395611**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Arsenic	1000	1020		ug/L		102	85 - 115
Chromium	1000	1020		ug/L		102	85 - 115
Lead	1000	1010		ug/L		101	85 - 115

**Lab Sample ID: LCSD 580-395611/15-A**  
**Matrix: Water**  
**Analysis Batch: 395687**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total/NA**  
**Prep Batch: 395611**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Arsenic	1000	1020		ug/L		102	85 - 115	1	20
Chromium	1000	1040		ug/L		104	85 - 115	2	20
Lead	1000	1020		ug/L		102	85 - 115	1	20

**Lab Sample ID: 580-115391-1 MS**  
**Matrix: Water**  
**Analysis Batch: 395687**

**Client Sample ID: FWTC Pond-Raw**  
**Prep Type: Total/NA**  
**Prep Batch: 395611**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Arsenic	12		1000	1060		ug/L		105	70 - 130
Chromium	6.0		1000	1080		ug/L		107	70 - 130
Lead	0.73		1000	1060		ug/L		106	70 - 130

**Lab Sample ID: 580-115391-1 MSD**  
**Matrix: Water**  
**Analysis Batch: 395687**

**Client Sample ID: FWTC Pond-Raw**  
**Prep Type: Total/NA**  
**Prep Batch: 395611**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Arsenic	12		1000	1040		ug/L		103	70 - 130	2	20
Chromium	6.0		1000	1050		ug/L		104	70 - 130	3	20
Lead	0.73		1000	1030		ug/L		103	70 - 130	3	20

**Lab Sample ID: 580-115391-1 DU**  
**Matrix: Water**  
**Analysis Batch: 395687**

**Client Sample ID: FWTC Pond-Raw**  
**Prep Type: Total/NA**  
**Prep Batch: 395611**

Analyte	Sample Result	Sample Qualifier	Spike Added	DU Result	DU Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Arsenic	12		1000	12.6		ug/L				5	20
Chromium	6.0		1000	7.09		ug/L				17	20
Lead	0.73		1000	0.856		ug/L				16	20

# Lab Chronicle

Client: Kiewit Infrastructure West Co.  
 Project/Site: Federal Way Link Extension\_06/30/2022 FWTC  
 Pond

Job ID: 580-115391-1

**Client Sample ID: FWTC Pond-Raw**

**Lab Sample ID: 580-115391-1**

**Date Collected: 06/30/22 07:15**

**Matrix: Water**

**Date Received: 06/30/22 09:38**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	395525	06/30/22 15:21	BNM	FGS SEA
Total/NA	Analysis	NWTPH-Gx		1	395465	06/30/22 20:25	BNM	FGS SEA
Total/NA	Prep	3510C			36841	07/01/22 15:42	NMI	TAL SPK
Total/NA	Analysis	8270E SIM		1	36846	07/01/22 16:20	NMI	TAL SPK
Total/NA	Prep	3510C			395658	07/01/22 09:41	JJY	FGS SEA
Total/NA	Analysis	NWTPH-Dx		1	395629	07/01/22 18:37	Y1F	FGS SEA
Total/NA	Prep	3510C			395658	07/01/22 09:41	JJY	FGS SEA
Total/NA	Cleanup	3630C			395660	07/01/22 09:55	JJY	FGS SEA
Total/NA	Analysis	NWTPH-Dx		1	395629	07/01/22 19:56	Y1F	FGS SEA
Total/NA	Prep	200.8			395611	06/30/22 19:11	JLS	FGS SEA
Total/NA	Analysis	200.8		1	395687	07/01/22 10:57	FCW	FGS SEA

**Laboratory References:**

FGS SEA = Eurofins Seattle, 5755 8th Street East, Tacoma, WA 98424, TEL (253)922-2310  
 TAL SPK = Eurofins Spokane, 11922 East 1st Ave, Spokane, WA 99206, TEL (509)924-9200

# Accreditation/Certification Summary

Client: Kiewit Infrastructure West Co.  
Project/Site: Federal Way Link Extension\_06/30/2022 FWTC  
Pond

Job ID: 580-115391-1

## Laboratory: Eurofins Seattle

The accreditations/certifications listed below are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Washington	State	C788	07-13-22

## Laboratory: Eurofins Spokane

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Alaska (UST)	State	17-025	01-07-23
Oregon	NELAP	4137	12-08-22
Washington	State	C569	01-06-23



# Sample Summary

Client: Kiewit Infrastructure West Co.  
Project/Site: Federal Way Link Extension\_06/30/2022 FWTC  
Pond

Job ID: 580-115391-1

---

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
580-115391-1	FWTC Pond-Raw	Water	06/30/22 07:15	06/30/22 09:38

1

2

3

4

5

6

7

8

9

10

11





# Login Sample Receipt Checklist

Client: Kiewit Infrastructure West Co.

Job Number: 580-115391-1

**Login Number: 115391**

**List Number: 1**

**Creator: Greene, Ashton R**

**List Source: Eurofins Seattle**

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

# Login Sample Receipt Checklist

Client: Kiewit Infrastructure West Co.

Job Number: 580-115391-1

**Login Number: 115391**

**List Number: 2**

**Creator: Vaughan, Madison 1**

**List Source: Eurofins Spokane**

**List Creation: 07/01/22 10:44 AM**

Question	Answer	Comment
Radioactivity wasn't checked or is <math>\leq</math> background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <math><6\text{mm}</math> (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	



## ANALYTICAL REPORT

Eurofins Seattle  
5755 8th Street East  
Tacoma, WA 98424  
Tel: (253)922-2310

Laboratory Job ID: 580-118361-1

Client Project/Site: Federal Way Link Extension\_09/29/2022  
FWTC Pond

For:

Kiewit Infrastructure West Co.  
2505 S 320th Street  
Federal Way, Washington 98003

Attn: Emma Temples



Authorized for release by:  
10/4/2022 10:45:49 AM

Pauline Matlock, Project Manager  
(253)922-2310

[Pauline.Matlock@et.eurofinsus.com](mailto:Pauline.Matlock@et.eurofinsus.com)

### LINKS

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This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.



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# Case Narrative

Client: Kiewit Infrastructure West Co.  
Project/Site: Federal Way Link Extension\_09/29/2022 FWTC Pond

Job ID: 580-118361-1

**Job ID: 580-118361-1**

**Laboratory: Eurofins Seattle**

## Narrative

### Job Narrative 580-118361-1

#### Comments

No additional comments.

#### Receipt

The sample was received on 9/29/2022 8:54 AM. Unless otherwise noted below, the sample arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 17.6° C.

#### GC/MS VOA

Method 8260D: The minimum response factor (RF) criteria for the continuing calibration verification (CCV) analyzed in batch 580-405534 was outside criteria for the following analyte(s): 2-Butanone (MEK). As indicated in the reference method, sample analysis may proceed; however, any detection or non-detection for the affected analyte(s) is considered estimated.

Method 8260D: Sample was re-analyzed due to %RSD failures on the initial calibration for 2-Butanone. Both sets of data are being reported for that analyte.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

#### GC/MS Semi VOA

Method 8270E: J-flagged confirmations - Detections have been confirmed during secondary review. FWTC Pond- Raw (580-118361-1)

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

#### GC Semi VOA

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

#### Metals

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

#### Organic Prep

Method 3510C: The following sample formed emulsions during the extraction procedure: FWTC Pond- Raw (580-118361-1). The emulsions were broken up using additional sodium sulfate filtration and methylene chloride rinses as needed.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

#### VOA Prep

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

# Definitions/Glossary

Client: Kiewit Infrastructure West Co.  
Project/Site: Federal Way Link Extension\_09/29/2022 FWTC  
Pond

Job ID: 580-118361-1

## Qualifiers

### GC/MS VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

### GC/MS Semi VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

## Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
▫	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

# Client Sample Results

Client: Kiewit Infrastructure West Co.  
 Project/Site: Federal Way Link Extension\_09/29/2022 FWTC  
 Pond

Job ID: 580-118361-1

**Client Sample ID: FWTC Pond- Raw**

**Lab Sample ID: 580-118361-1**

**Date Collected: 09/29/22 08:10**

**Matrix: Water**

**Date Received: 09/29/22 14:35**

## Method: 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		0.50	0.17	ug/L			09/30/22 07:37	1
<b>1,2,4-Trimethylbenzene</b>	<b>2.1</b>		0.50	0.20	ug/L			09/30/22 07:37	1
<b>1,3,5-Trimethylbenzene</b>	<b>0.61</b>		0.50	0.15	ug/L			09/30/22 07:37	1
1,4-Dichlorobenzene	ND		0.30	0.050	ug/L			09/30/22 07:37	1
2-Butanone (MEK)	ND		10	2.5	ug/L			09/30/22 07:37	1
<b>2-Butanone (MEK)</b>	<b>2.7 J</b>		10	2.5	ug/L			09/30/22 20:29	1
4-Isopropyltoluene	ND		0.50	0.15	ug/L			09/30/22 07:37	1
<b>Acetone</b>	<b>19</b>		10	3.1	ug/L			09/30/22 07:37	1
Benzene	ND		0.20	0.030	ug/L			09/30/22 07:37	1
Carbon disulfide	ND		0.30	0.083	ug/L			09/30/22 07:37	1
Chlorobenzene	ND		0.20	0.060	ug/L			09/30/22 07:37	1
cis-1,2-Dichloroethene	ND		0.20	0.055	ug/L			09/30/22 07:37	1
<b>Ethylbenzene</b>	<b>1.6</b>		0.20	0.030	ug/L			09/30/22 07:37	1
Isopropylbenzene	ND		1.0	0.19	ug/L			09/30/22 07:37	1
<b>m-Xylene &amp; p-Xylene</b>	<b>4.2</b>		0.50	0.12	ug/L			09/30/22 07:37	1
<b>n-Butylbenzene</b>	<b>0.30 J</b>		1.0	0.23	ug/L			09/30/22 07:37	1
<b>N-Propylbenzene</b>	<b>0.71</b>		0.30	0.091	ug/L			09/30/22 07:37	1
<b>o-Xylene</b>	<b>1.2</b>		0.50	0.15	ug/L			09/30/22 07:37	1
sec-Butylbenzene	ND		1.0	0.17	ug/L			09/30/22 07:37	1
tert-Butylbenzene	ND		0.50	0.26	ug/L			09/30/22 07:37	1
Tetrachloroethene	ND		0.50	0.084	ug/L			09/30/22 07:37	1
<b>Toluene</b>	<b>0.42</b>		0.20	0.050	ug/L			09/30/22 07:37	1
Trichloroethene	ND		0.20	0.066	ug/L			09/30/22 07:37	1
Vinyl chloride	ND		0.020	0.013	ug/L			09/30/22 07:37	1
<b>Xylenes, Total</b>	<b>5.4</b>		0.50	0.15	ug/L			09/30/22 07:37	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	91		80 - 120		09/30/22 07:37	1
1,2-Dichloroethane-d4 (Surr)	108		80 - 120		09/30/22 20:29	1
4-Bromofluorobenzene (Surr)	98		80 - 120		09/30/22 07:37	1
4-Bromofluorobenzene (Surr)	112		80 - 120		09/30/22 20:29	1
Dibromofluoromethane (Surr)	107		80 - 120		09/30/22 07:37	1
Dibromofluoromethane (Surr)	109		80 - 120		09/30/22 20:29	1
Toluene-d8 (Surr)	100		80 - 120		09/30/22 07:37	1
Toluene-d8 (Surr)	104		80 - 120		09/30/22 20:29	1

## Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Gasoline</b>	<b>41 J</b>		50	14	ug/L			09/30/22 05:01	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	97		77 - 123		09/30/22 05:01	1

## Method: 8270E - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Acenaphthene</b>	<b>0.72</b>		0.38	0.047	ug/L		09/30/22 10:02	09/30/22 21:36	1
Anthracene	ND		0.95	0.047	ug/L		09/30/22 10:02	09/30/22 21:36	1
Benzo[a]anthracene	ND		0.24	0.047	ug/L		09/30/22 10:02	09/30/22 21:36	1
Benzo[a]pyrene	ND		0.24	0.038	ug/L		09/30/22 10:02	09/30/22 21:36	1

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# Client Sample Results

Client: Kiewit Infrastructure West Co.  
 Project/Site: Federal Way Link Extension\_09/29/2022 FWTC  
 Pond

Job ID: 580-118361-1

**Client Sample ID: FWTC Pond- Raw**

**Lab Sample ID: 580-118361-1**

**Date Collected: 09/29/22 08:10**

**Matrix: Water**

**Date Received: 09/29/22 14:35**

## Method: 8270E - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[b]fluoranthene	ND		0.24	0.038	ug/L		09/30/22 10:02	09/30/22 21:36	1
Benzo[g,h,i]perylene	ND		0.24	0.038	ug/L		09/30/22 10:02	09/30/22 21:36	1
Chrysene	ND		0.24	0.085	ug/L		09/30/22 10:02	09/30/22 21:36	1
Fluoranthene	ND		0.24	0.057	ug/L		09/30/22 10:02	09/30/22 21:36	1
<b>Fluorene</b>	<b>0.048</b>	<b>J</b>	0.24	0.047	ug/L		09/30/22 10:02	09/30/22 21:36	1
<b>1-Methylnaphthalene</b>	<b>0.17</b>	<b>J</b>	0.95	0.047	ug/L		09/30/22 10:02	09/30/22 21:36	1
<b>2-Methylnaphthalene</b>	<b>0.099</b>	<b>J</b>	0.38	0.057	ug/L		09/30/22 10:02	09/30/22 21:36	1
<b>Naphthalene</b>	<b>0.39</b>		0.38	0.15	ug/L		09/30/22 10:02	09/30/22 21:36	1
Phenanthrene	ND		0.95	0.11	ug/L		09/30/22 10:02	09/30/22 21:36	1
Pyrene	ND		0.95	0.038	ug/L		09/30/22 10:02	09/30/22 21:36	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl	71		35 - 120	09/30/22 10:02	09/30/22 21:36	1
2-Fluorophenol (Surr)	39		21 - 120	09/30/22 10:02	09/30/22 21:36	1
Nitrobenzene-d5 (Surr)	81		39 - 120	09/30/22 10:02	09/30/22 21:36	1
Phenol-d5 (Surr)	27		10 - 120	09/30/22 10:02	09/30/22 21:36	1
Terphenyl-d14 (Surr)	106		63 - 137	09/30/22 10:02	09/30/22 21:36	1
2,4,6-Tribromophenol (Surr)	82		50 - 130	09/30/22 10:02	09/30/22 21:36	1

## Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>#2 Diesel (C10-C24)</b>	<b>550</b>		110	66	ug/L		09/30/22 10:03	10/01/22 00:12	1
<b>Motor Oil (&gt;C24-C36)</b>	<b>570</b>		350	97	ug/L		09/30/22 10:03	10/01/22 00:12	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
o-Terphenyl	69		50 - 150	09/30/22 10:03	10/01/22 00:12	1

## Method: NWTPH-Dx - Semi-Volatile Petroleum Products by NWTPH with Silica Gel Cleanup

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	ND		110	66	ug/L		09/30/22 10:03	09/30/22 23:15	1
Motor Oil (>C24-C36)	ND		350	97	ug/L		09/30/22 10:03	09/30/22 23:15	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
o-Terphenyl	68		50 - 150	09/30/22 10:03	09/30/22 23:15	1

## Method: 200.8 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Arsenic</b>	<b>7.4</b>		1.0	0.20	ug/L		09/30/22 10:21	09/30/22 16:11	1
<b>Chromium</b>	<b>5.2</b>		0.80	0.17	ug/L		09/30/22 10:21	09/30/22 16:11	1
<b>Lead</b>	<b>0.60</b>		0.40	0.040	ug/L		09/30/22 10:21	09/30/22 16:11	1

# QC Sample Results

Client: Kiewit Infrastructure West Co.  
 Project/Site: Federal Way Link Extension\_09/29/2022 FWTC  
 Pond

Job ID: 580-118361-1

## Method: 8260D - Volatile Organic Compounds by GC/MS

**Lab Sample ID: MB 580-405534/6**  
**Matrix: Water**  
**Analysis Batch: 405534**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		0.50	0.17	ug/L			09/30/22 04:23	1
1,2,4-Trimethylbenzene	ND		0.50	0.20	ug/L			09/30/22 04:23	1
1,3,5-Trimethylbenzene	ND		0.50	0.15	ug/L			09/30/22 04:23	1
1,4-Dichlorobenzene	ND		0.30	0.050	ug/L			09/30/22 04:23	1
2-Butanone (MEK)	ND		10	2.5	ug/L			09/30/22 04:23	1
4-Isopropyltoluene	ND		0.50	0.15	ug/L			09/30/22 04:23	1
Acetone	ND		10	3.1	ug/L			09/30/22 04:23	1
Benzene	ND		0.20	0.030	ug/L			09/30/22 04:23	1
Carbon disulfide	ND		0.30	0.083	ug/L			09/30/22 04:23	1
Chlorobenzene	ND		0.20	0.060	ug/L			09/30/22 04:23	1
cis-1,2-Dichloroethene	ND		0.20	0.055	ug/L			09/30/22 04:23	1
Ethylbenzene	ND		0.20	0.030	ug/L			09/30/22 04:23	1
Isopropylbenzene	ND		1.0	0.19	ug/L			09/30/22 04:23	1
m-Xylene & p-Xylene	ND		0.50	0.12	ug/L			09/30/22 04:23	1
n-Butylbenzene	ND		1.0	0.23	ug/L			09/30/22 04:23	1
N-Propylbenzene	ND		0.30	0.091	ug/L			09/30/22 04:23	1
o-Xylene	ND		0.50	0.15	ug/L			09/30/22 04:23	1
sec-Butylbenzene	ND		1.0	0.17	ug/L			09/30/22 04:23	1
tert-Butylbenzene	ND		0.50	0.26	ug/L			09/30/22 04:23	1
Tetrachloroethene	ND		0.50	0.084	ug/L			09/30/22 04:23	1
Toluene	ND		0.20	0.050	ug/L			09/30/22 04:23	1
Trichloroethene	ND		0.20	0.066	ug/L			09/30/22 04:23	1
Vinyl chloride	ND		0.020	0.013	ug/L			09/30/22 04:23	1
Xylenes, Total	ND		0.50	0.15	ug/L			09/30/22 04:23	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	100		80 - 120		09/30/22 04:23	1
4-Bromofluorobenzene (Surr)	91		80 - 120		09/30/22 04:23	1
Dibromofluoromethane (Surr)	105		80 - 120		09/30/22 04:23	1
Toluene-d8 (Surr)	102		80 - 120		09/30/22 04:23	1

**Lab Sample ID: LCS 580-405534/3**  
**Matrix: Water**  
**Analysis Batch: 405534**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
1,2,4-Trichlorobenzene	5.00	5.19		ug/L		104	60 - 130
1,2,4-Trimethylbenzene	5.00	5.40		ug/L		108	71 - 127
1,3,5-Trimethylbenzene	5.00	5.59		ug/L		112	75 - 123
1,4-Dichlorobenzene	5.00	5.63		ug/L		113	71 - 129
2-Butanone (MEK)	25.0	23.0		ug/L		92	37 - 150
4-Isopropyltoluene	5.00	5.53		ug/L		111	78 - 125
Acetone	25.0	29.4		ug/L		118	49 - 150
Benzene	5.00	5.30		ug/L		106	80 - 120
Carbon disulfide	5.00	5.69		ug/L		114	54 - 142
Chlorobenzene	5.00	5.46		ug/L		109	74 - 123
cis-1,2-Dichloroethene	5.00	5.04		ug/L		101	72 - 120

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# QC Sample Results

Client: Kiewit Infrastructure West Co.  
 Project/Site: Federal Way Link Extension\_09/29/2022 FWTC  
 Pond

Job ID: 580-118361-1

## Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

**Lab Sample ID: LCS 580-405534/3**  
**Matrix: Water**  
**Analysis Batch: 405534**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Ethylbenzene	5.00	5.57		ug/L		111	80 - 124
Isopropylbenzene	5.00	5.36		ug/L		107	71 - 123
m-Xylene & p-Xylene	5.00	5.68		ug/L		114	75 - 124
n-Butylbenzene	5.00	5.09		ug/L		102	69 - 127
N-Propylbenzene	5.00	5.07		ug/L		101	72 - 126
o-Xylene	5.00	5.26		ug/L		105	71 - 124
sec-Butylbenzene	5.00	5.53		ug/L		111	75 - 126
tert-Butylbenzene	5.00	5.65		ug/L		113	70 - 129
Tetrachloroethene	5.00	5.50		ug/L		110	75 - 124
Toluene	5.00	5.26		ug/L		105	80 - 126
Trichloroethene	5.00	5.08		ug/L		102	72 - 120
Vinyl chloride	5.00	6.28		ug/L		126	41 - 150
Xylenes, Total	10.0	10.9		ug/L		109	73 - 123

Surrogate	LCS LCS		Limits
	%Recovery	Qualifier	
1,2-Dichloroethane-d4 (Surr)	96		80 - 120
4-Bromofluorobenzene (Surr)	101		80 - 120
Dibromofluoromethane (Surr)	102		80 - 120
Toluene-d8 (Surr)	101		80 - 120

**Lab Sample ID: LCSD 580-405534/4**  
**Matrix: Water**  
**Analysis Batch: 405534**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total/NA**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
1,2,4-Trichlorobenzene	5.00	4.75		ug/L		95	60 - 130	9	26
1,2,4-Trimethylbenzene	5.00	5.12		ug/L		102	71 - 127	5	23
1,3,5-Trimethylbenzene	5.00	5.21		ug/L		104	75 - 123	7	23
1,4-Dichlorobenzene	5.00	5.06		ug/L		101	71 - 129	11	22
2-Butanone (MEK)	25.0	25.5		ug/L		102	37 - 150	10	35
4-Isopropyltoluene	5.00	5.13		ug/L		103	78 - 125	8	24
Acetone	25.0	29.5		ug/L		118	49 - 150	0	24
Benzene	5.00	5.36		ug/L		107	80 - 120	1	22
Carbon disulfide	5.00	5.65		ug/L		113	54 - 142	1	34
Chlorobenzene	5.00	5.28		ug/L		106	74 - 123	4	21
cis-1,2-Dichloroethene	5.00	4.90		ug/L		98	72 - 120	3	22
Ethylbenzene	5.00	5.31		ug/L		106	80 - 124	5	22
Isopropylbenzene	5.00	5.09		ug/L		102	71 - 123	5	23
m-Xylene & p-Xylene	5.00	5.16		ug/L		103	75 - 124	10	22
n-Butylbenzene	5.00	4.91		ug/L		98	69 - 127	4	24
N-Propylbenzene	5.00	4.74		ug/L		95	72 - 126	7	20
o-Xylene	5.00	5.08		ug/L		102	71 - 124	4	23
sec-Butylbenzene	5.00	5.20		ug/L		104	75 - 126	6	23
tert-Butylbenzene	5.00	5.22		ug/L		104	70 - 129	8	24
Tetrachloroethene	5.00	5.25		ug/L		105	75 - 124	5	20
Toluene	5.00	5.26		ug/L		105	80 - 126	0	20
Trichloroethene	5.00	4.95		ug/L		99	72 - 120	3	22

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# QC Sample Results

Client: Kiewit Infrastructure West Co.  
 Project/Site: Federal Way Link Extension\_09/29/2022 FWTC  
 Pond

Job ID: 580-118361-1

## Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

**Lab Sample ID: LCSD 580-405534/4**  
**Matrix: Water**  
**Analysis Batch: 405534**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total/NA**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Vinyl chloride	5.00	5.83		ug/L		117	41 - 150	7	32
Xylenes, Total	10.0	10.2		ug/L		102	73 - 123	7	20
<b>LCSD LCSD</b>									
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>						
1,2-Dichloroethane-d4 (Surr)	101		80 - 120						
4-Bromofluorobenzene (Surr)	103		80 - 120						
Dibromofluoromethane (Surr)	107		80 - 120						
Toluene-d8 (Surr)	104		80 - 120						

**Lab Sample ID: MB 580-405644/6**  
**Matrix: Water**  
**Analysis Batch: 405644**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Butanone (MEK)	ND		10	2.5	ug/L			09/30/22 13:53	1
<b>MB MB</b>									
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>				<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
1,2-Dichloroethane-d4 (Surr)	116		80 - 120					09/30/22 13:53	1
4-Bromofluorobenzene (Surr)	93		80 - 120					09/30/22 13:53	1
Dibromofluoromethane (Surr)	118		80 - 120					09/30/22 13:53	1
Toluene-d8 (Surr)	99		80 - 120					09/30/22 13:53	1

**Lab Sample ID: LCS 580-405644/3**  
**Matrix: Water**  
**Analysis Batch: 405644**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
2-Butanone (MEK)	25.0	24.4		ug/L		98	37 - 150		
<b>LCS LCS</b>									
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>						
1,2-Dichloroethane-d4 (Surr)	92		80 - 120						
4-Bromofluorobenzene (Surr)	109		80 - 120						
Dibromofluoromethane (Surr)	90		80 - 120						
Toluene-d8 (Surr)	101		80 - 120						

**Lab Sample ID: LCSD 580-405644/4**  
**Matrix: Water**  
**Analysis Batch: 405644**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total/NA**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
2-Butanone (MEK)	25.0	25.2		ug/L		101	37 - 150	3	35
<b>LCSD LCSD</b>									
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>						
1,2-Dichloroethane-d4 (Surr)	92		80 - 120						
4-Bromofluorobenzene (Surr)	106		80 - 120						
Dibromofluoromethane (Surr)	91		80 - 120						

# QC Sample Results

Client: Kiewit Infrastructure West Co.  
 Project/Site: Federal Way Link Extension\_09/29/2022 FWTC  
 Pond

Job ID: 580-118361-1

## Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCSD 580-405644/4  
 Matrix: Water  
 Analysis Batch: 405644

Client Sample ID: Lab Control Sample Dup  
 Prep Type: Total/NA

Surrogate	LCS	LCS	Limits
	%Recovery	Qualifier	
Toluene-d8 (Surr)	101		80 - 120

## Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC/MS)

Lab Sample ID: MB 580-405527/4  
 Matrix: Water  
 Analysis Batch: 405527

Client Sample ID: Method Blank  
 Prep Type: Total/NA

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Gasoline	ND		50	14	ug/L			09/30/22 01:20	1

Surrogate	MB	MB	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
4-Bromofluorobenzene (Surr)	101		77 - 123		09/30/22 01:20	1

Lab Sample ID: LCS 580-405527/5  
 Matrix: Water  
 Analysis Batch: 405527

Client Sample ID: Lab Control Sample  
 Prep Type: Total/NA

Analyte	Spike	LCS	LCS	Unit	D	%Rec	%Rec	Limits
	Added	Result	Qualifier					
Gasoline	1000	811		ug/L		81		55 - 148

Surrogate	LCS	LCS	Limits
	%Recovery	Qualifier	
4-Bromofluorobenzene (Surr)	99		77 - 123

Lab Sample ID: LCSD 580-405527/6  
 Matrix: Water  
 Analysis Batch: 405527

Client Sample ID: Lab Control Sample Dup  
 Prep Type: Total/NA

Analyte	Spike	LCSD	LCSD	Unit	D	%Rec	%Rec	Limits	RPD	RPD
	Added	Result	Qualifier							Limit
Gasoline	1000	825		ug/L		83		55 - 148	2	10

Surrogate	LCSD	LCSD	Limits
	%Recovery	Qualifier	
4-Bromofluorobenzene (Surr)	98		77 - 123

## Method: 8270E - Semivolatile Organic Compounds (GC/MS)

Lab Sample ID: MB 580-405567/1-A  
 Matrix: Water  
 Analysis Batch: 405608

Client Sample ID: Method Blank  
 Prep Type: Total/NA  
 Prep Batch: 405567

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Acenaphthene	ND		0.40	0.050	ug/L		09/30/22 09:56	09/30/22 16:51	1
Anthracene	ND		1.0	0.050	ug/L		09/30/22 09:56	09/30/22 16:51	1
Benzo[a]anthracene	ND		0.25	0.050	ug/L		09/30/22 09:56	09/30/22 16:51	1
Benzo[a]pyrene	ND		0.25	0.040	ug/L		09/30/22 09:56	09/30/22 16:51	1
Benzo[b]fluoranthene	ND		0.25	0.040	ug/L		09/30/22 09:56	09/30/22 16:51	1
Benzo[g,h,i]perylene	ND		0.25	0.040	ug/L		09/30/22 09:56	09/30/22 16:51	1

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# QC Sample Results

Client: Kiewit Infrastructure West Co.  
 Project/Site: Federal Way Link Extension\_09/29/2022 FWTC  
 Pond

Job ID: 580-118361-1

## Method: 8270E - Semivolatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: MB 580-405567/1-A**  
**Matrix: Water**  
**Analysis Batch: 405608**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 405567**

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Chrysene	ND		0.25	0.090	ug/L		09/30/22 09:56	09/30/22 16:51	1
Fluoranthene	ND		0.25	0.060	ug/L		09/30/22 09:56	09/30/22 16:51	1
Fluorene	ND		0.25	0.050	ug/L		09/30/22 09:56	09/30/22 16:51	1
1-Methylnaphthalene	ND		1.0	0.050	ug/L		09/30/22 09:56	09/30/22 16:51	1
2-Methylnaphthalene	ND		0.40	0.060	ug/L		09/30/22 09:56	09/30/22 16:51	1
Naphthalene	ND		0.40	0.16	ug/L		09/30/22 09:56	09/30/22 16:51	1
Phenanthrene	ND		1.0	0.12	ug/L		09/30/22 09:56	09/30/22 16:51	1
Pyrene	ND		1.0	0.040	ug/L		09/30/22 09:56	09/30/22 16:51	1

Surrogate	MB MB		Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
2-Fluorobiphenyl	63		35 - 120	09/30/22 09:56	09/30/22 16:51	1
2-Fluorophenol (Surr)	39		21 - 120	09/30/22 09:56	09/30/22 16:51	1
Nitrobenzene-d5 (Surr)	84		39 - 120	09/30/22 09:56	09/30/22 16:51	1
Phenol-d5 (Surr)	31		10 - 120	09/30/22 09:56	09/30/22 16:51	1
Terphenyl-d14 (Surr)	135		63 - 137	09/30/22 09:56	09/30/22 16:51	1
2,4,6-Tribromophenol (Surr)	100		50 - 130	09/30/22 09:56	09/30/22 16:51	1

**Lab Sample ID: LCS 580-405567/2-A**  
**Matrix: Water**  
**Analysis Batch: 405608**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 405567**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Anthracene	2.00	1.62		ug/L		81	58 - 120
Benzo[a]anthracene	2.00	1.72		ug/L		86	48 - 131
Benzo[a]pyrene	2.00	1.70		ug/L		85	55 - 125
Benzo[b]fluoranthene	2.00	1.82		ug/L		91	54 - 124
Benzo[g,h,i]perylene	2.00	1.75		ug/L		87	46 - 124
Chrysene	2.00	1.80		ug/L		90	57 - 125
Fluoranthene	2.00	1.78		ug/L		89	60 - 121
Fluorene	2.00	1.66		ug/L		83	20 - 120
1-Methylnaphthalene	2.00	1.44		ug/L		72	36 - 120
2-Methylnaphthalene	2.00	1.60		ug/L		80	35 - 120
Naphthalene	2.00	1.50		ug/L		75	42 - 120
Phenanthrene	2.00	1.64		ug/L		82	54 - 120
Pyrene	2.00	1.76		ug/L		88	57 - 120

Surrogate	LCS LCS		Limits
	%Recovery	Qualifier	
2-Fluorobiphenyl	77		35 - 120
2-Fluorophenol (Surr)	49		21 - 120
Nitrobenzene-d5 (Surr)	77		39 - 120
Phenol-d5 (Surr)	27		10 - 120
Terphenyl-d14 (Surr)	107		63 - 137
2,4,6-Tribromophenol (Surr)	89		50 - 130

# QC Sample Results

Client: Kiewit Infrastructure West Co.  
 Project/Site: Federal Way Link Extension\_09/29/2022 FWTC  
 Pond

Job ID: 580-118361-1

## Method: 8270E - Semivolatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: LCSD 580-405567/3-A**  
**Matrix: Water**  
**Analysis Batch: 405608**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total/NA**  
**Prep Batch: 405567**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec		RPD	Limit
							Limits	RPD		
Acenaphthene	2.00	1.45		ug/L		72	41 - 120	10	35	
Anthracene	2.00	1.63		ug/L		81	58 - 120	0	35	
Benzo[a]anthracene	2.00	1.72		ug/L		86	48 - 131	0	35	
Benzo[a]pyrene	2.00	1.76		ug/L		88	55 - 125	4	35	
Benzo[b]fluoranthene	2.00	1.72		ug/L		86	54 - 124	6	35	
Benzo[g,h,i]perylene	2.00	1.80		ug/L		90	46 - 124	3	35	
Chrysene	2.00	1.63		ug/L		82	57 - 125	9	35	
Fluoranthene	2.00	1.66		ug/L		83	60 - 121	7	35	
Fluorene	2.00	1.57		ug/L		78	20 - 120	6	35	
1-Methylnaphthalene	2.00	1.51		ug/L		75	36 - 120	5	35	
2-Methylnaphthalene	2.00	1.53		ug/L		76	35 - 120	4	35	
Naphthalene	2.00	1.56		ug/L		78	42 - 120	4	35	
Phenanthrene	2.00	1.51		ug/L		75	54 - 120	8	35	
Pyrene	2.00	1.66		ug/L		83	57 - 120	6	35	

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
2-Fluorobiphenyl	72		35 - 120
2-Fluorophenol (Surr)	41		21 - 120
Nitrobenzene-d5 (Surr)	88		39 - 120
Phenol-d5 (Surr)	32		10 - 120
Terphenyl-d14 (Surr)	105		63 - 137
2,4,6-Tribromophenol (Surr)	61		50 - 130

## Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

**Lab Sample ID: MB 580-405569/1-A**  
**Matrix: Water**  
**Analysis Batch: 405691**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 405569**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	ND		110	65	ug/L		09/30/22 10:03	09/30/22 20:25	1
Motor Oil (>C24-C36)	ND		350	96	ug/L		09/30/22 10:03	09/30/22 20:25	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
o-Terphenyl	68		50 - 150	09/30/22 10:03	09/30/22 20:25	1

**Lab Sample ID: LCS 580-405569/2-A**  
**Matrix: Water**  
**Analysis Batch: 405691**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 405569**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec	
							Limits	RPD
#2 Diesel (C10-C24)	4000	3090		ug/L		77	50 - 120	
Motor Oil (>C24-C36)	4000	3360		ug/L		84	64 - 120	

Surrogate	LCS %Recovery	LCS Qualifier	Limits
o-Terphenyl	85		50 - 150

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# QC Sample Results

Client: Kiewit Infrastructure West Co.  
 Project/Site: Federal Way Link Extension\_09/29/2022 FWTC  
 Pond

Job ID: 580-118361-1

## Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC) (Continued)

**Lab Sample ID: LCSD 580-405569/3-A**  
**Matrix: Water**  
**Analysis Batch: 405691**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total/NA**  
**Prep Batch: 405569**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec		RPD	Limit
							Limits	RPD		
#2 Diesel (C10-C24)	4000	3120		ug/L		78	50 - 120	1		26
Motor Oil (>C24-C36)	4000	3300		ug/L		82	64 - 120	2		24
		<b>LCS</b>	<b>LCS</b>							
<b>Surrogate</b>		<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>						
<i>o</i> -Terphenyl		83		50 - 150						

## Method: NWTPH-Dx - Semi-Volatile Petroleum Products by NWTPH with Silica Gel Cleanup

**Lab Sample ID: MB 580-405569/1-B**  
**Matrix: Water**  
**Analysis Batch: 405694**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 405569**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared		Analyzed		Dil Fac
							Time	Time	Time	Time	
#2 Diesel (C10-C24)	ND		110	65	ug/L		09/30/22 10:03	09/30/22 22:19	09/30/22 22:19		1
Motor Oil (>C24-C36)	ND		350	96	ug/L		09/30/22 10:03	09/30/22 22:19	09/30/22 22:19		1
		<b>MB</b>	<b>MB</b>								
<b>Surrogate</b>		<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>			<b>Prepared</b>		<b>Analyzed</b>		<b>Dil Fac</b>
<i>o</i> -Terphenyl		74		50 - 150			09/30/22 10:03		09/30/22 22:19		1

**Lab Sample ID: LCS 580-405569/2-B**  
**Matrix: Water**  
**Analysis Batch: 405694**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 405569**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec		RPD	Limit
							Limits	RPD		
#2 Diesel (C10-C24)	4000	3440		ug/L		86	50 - 120			26
Motor Oil (>C24-C36)	4000	3810		ug/L		95	64 - 120			24
		<b>LCS</b>	<b>LCS</b>							
<b>Surrogate</b>		<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>						
<i>o</i> -Terphenyl		94		50 - 150						

**Lab Sample ID: LCSD 580-405569/3-B**  
**Matrix: Water**  
**Analysis Batch: 405694**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total/NA**  
**Prep Batch: 405569**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec		RPD	Limit
							Limits	RPD		
#2 Diesel (C10-C24)	4000	3530		ug/L		88	50 - 120	3		26
Motor Oil (>C24-C36)	4000	3840		ug/L		96	64 - 120	1		24
		<b>LCS</b>	<b>LCS</b>							
<b>Surrogate</b>		<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>						
<i>o</i> -Terphenyl		93		50 - 150						

# QC Sample Results

Client: Kiewit Infrastructure West Co.  
 Project/Site: Federal Way Link Extension\_09/29/2022 FWTC  
 Pond

Job ID: 580-118361-1

## Method: 200.8 - Metals (ICP/MS)

**Lab Sample ID: MB 580-405573/14-A**  
**Matrix: Water**  
**Analysis Batch: 405734**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 405573**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		1.0	0.20	ug/L		09/30/22 10:21	09/30/22 15:11	1
Chromium	ND		0.80	0.17	ug/L		09/30/22 10:21	09/30/22 15:11	1
Lead	ND		0.40	0.040	ug/L		09/30/22 10:21	09/30/22 15:11	1

**Lab Sample ID: LCS 580-405573/15-A**  
**Matrix: Water**  
**Analysis Batch: 405734**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 405573**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Arsenic	1000	1030		ug/L		103	85 - 115
Chromium	1000	1010		ug/L		101	85 - 115
Lead	1000	1020		ug/L		102	85 - 115

**Lab Sample ID: LCSD 580-405573/16-A**  
**Matrix: Water**  
**Analysis Batch: 405734**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total/NA**  
**Prep Batch: 405573**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Arsenic	1000	1060		ug/L		106	85 - 115	2	20
Chromium	1000	1020		ug/L		102	85 - 115	1	20
Lead	1000	1020		ug/L		102	85 - 115	1	20

# Lab Chronicle

Client: Kiewit Infrastructure West Co.  
 Project/Site: Federal Way Link Extension\_09/29/2022 FWTC  
 Pond

Job ID: 580-118361-1

**Client Sample ID: FWTC Pond- Raw**

**Lab Sample ID: 580-118361-1**

**Date Collected: 09/29/22 08:10**

**Matrix: Water**

**Date Received: 09/29/22 14:35**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	405534	TL1	EET SEA	09/30/22 07:37
Total/NA	Analysis	8260D		1	405644	BNM	EET SEA	09/30/22 20:29
Total/NA	Analysis	NWTPH-Gx		1	405527	RJL	EET SEA	09/30/22 05:01
Total/NA	Prep	3510C			405567	KLW	EET SEA	09/30/22 10:02
Total/NA	Analysis	8270E		1	405608	E1L	EET SEA	09/30/22 21:36
Total/NA	Prep	3510C			405569	KLW	EET SEA	09/30/22 10:03
Total/NA	Analysis	NWTPH-Dx		1	405691	DH	EET SEA	10/01/22 00:12
Total/NA	Prep	3510C			405569	KLW	EET SEA	09/30/22 10:03
Total/NA	Cleanup	3630C			405570	KLW	EET SEA	09/30/22 10:09
Total/NA	Analysis	NWTPH-Dx		1	405694	DH	EET SEA	09/30/22 23:15
Total/NA	Prep	200.8			405573	ABP	EET SEA	09/30/22 10:21
Total/NA	Analysis	200.8		1	405734	FCW	EET SEA	09/30/22 16:11

**Laboratory References:**

EET SEA = Eurofins Seattle, 5755 8th Street East, Tacoma, WA 98424, TEL (253)922-2310

# Accreditation/Certification Summary

Client: Kiewit Infrastructure West Co.  
Project/Site: Federal Way Link Extension\_09/29/2022 FWTC  
Pond

Job ID: 580-118361-1

## Laboratory: Eurofins Seattle

The accreditations/certifications listed below are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Washington	State	C788	07-13-23

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11

# Sample Summary

Client: Kiewit Infrastructure West Co.  
Project/Site: Federal Way Link Extension\_09/29/2022 FWTC  
Pond

Job ID: 580-118361-1

---

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
580-118361-1	FWTC Pond- Raw	Water	09/29/22 08:10	09/29/22 14:35

1

2

3

4

5

6

7

8

9

10

11



# Login Sample Receipt Checklist

Client: Kiewit Infrastructure West Co.

Job Number: 580-118361-1

**Login Number: 118361**

**List Number: 1**

**Creator: Swoope, Alexandra C**

**List Source: Eurofins Seattle**

Question	Answer	Comment
Radioactivity wasn't checked or is <math>\leq</math> background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	Received same day of collection; chilling process has begun.
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <math><6\text{mm}</math> (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	



 **ANALYTICAL REPORT****PREPARED FOR**

Attn: Ian Langdale  
Kiewit Infrastructure West Co.  
2505 S 320th Street  
Federal Way, Washington 98003

Generated 5/31/2023 5:15:02 PM

**JOB DESCRIPTION**

Federal Way Link Extension\_05/23/23 FWTC FW-A Raw

**JOB NUMBER**

580-127526-1

# Eurofins Seattle

## Job Notes

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Environment Testing Northwest, LLC Project Manager.

## Authorization



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5/31/2023 5:15:02 PM

Authorized for release by  
Laura Schick, Project Manager  
[Laura.Schick@et.eurofinsus.com](mailto:Laura.Schick@et.eurofinsus.com)  
(253)922-2310



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# Case Narrative

Client: Kiewit Infrastructure West Co.  
Project/Site: Federal Way Link Extension\_05/23/23 FWTC FW-A R

Job ID: 580-127526-1

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## Job ID: 580-127526-1

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### Laboratory: Eurofins Seattle

#### Narrative

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#### Job Narrative 580-127526-1

#### Receipt

The sample was received on 5/23/2023 2:37 PM. The temperature of the cooler at receipt was 20.3° C.

#### Receipt Exceptions

The following sample was received at the laboratory outside the required temperature criteria: FWTC FW-A Raw (580-127526-1). The sample was considered acceptable since it was collected and submitted to the laboratory on the same day and there was evidence that the chilling process had begun.

#### GC/MS VOA

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

#### GC/MS Semi VOA

Method 8270E: The method blank for preparation batch 580-426874 and analytical batch 580-427031 contained Benzo[b]fluoranthene above the method detection limit. This target analyte concentration was less than half the reporting limit (1/2 RL); therefore, re-extraction and/or re-analysis of samples was not performed.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

#### GC Semi VOA

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

#### Metals

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

#### Organic Prep

Method 3510C: The following sample formed emulsions during the extraction procedure: FWTC FW-A Raw (580-127526-1). The emulsions were broken up using additional methylene chloride rinses and sodium sulfate filtration.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

#### VOA Prep

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

# Definitions/Glossary

Client: Kiewit Infrastructure West Co.  
Project/Site: Federal Way Link Extension\_05/23/23 FWTC  
FW-A Raw

Job ID: 580-127526-1

## Qualifiers

### GC/MS VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

### GC/MS Semi VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

## Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
▫	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

# Client Sample Results

Client: Kiewit Infrastructure West Co.  
 Project/Site: Federal Way Link Extension\_05/23/23 FWTC  
 FW-A Raw

Job ID: 580-127526-1

**Client Sample ID: FWTC FW-A Raw**

**Lab Sample ID: 580-127526-1**

Date Collected: 05/23/23 13:50

Matrix: Water

Date Received: 05/23/23 14:37

**Method: SW846 8260D - Volatile Organic Compounds by GC/MS**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		0.50	0.17	ug/L			05/26/23 16:24	1
<b>1,2,4-Trimethylbenzene</b>	<b>8.5</b>		0.50	0.20	ug/L			05/26/23 16:24	1
<b>1,3,5-Trimethylbenzene</b>	<b>3.1</b>		0.50	0.15	ug/L			05/26/23 16:24	1
<b>2-Butanone (MEK)</b>	<b>2.8</b>	<b>J</b>	10	2.5	ug/L			05/26/23 16:24	1
4-Isopropyltoluene	ND		0.50	0.15	ug/L			05/26/23 16:24	1
<b>Acetone</b>	<b>92</b>		10	3.1	ug/L			05/26/23 16:24	1
<b>Benzene</b>	<b>1.7</b>		0.20	0.030	ug/L			05/26/23 16:24	1
Carbon disulfide	ND		0.30	0.083	ug/L			05/26/23 16:24	1
cis-1,2-Dichloroethene	ND		0.20	0.055	ug/L			05/26/23 16:24	1
<b>Ethylbenzene</b>	<b>6.2</b>		0.20	0.030	ug/L			05/26/23 16:24	1
<b>Isopropylbenzene</b>	<b>0.63</b>	<b>J</b>	1.0	0.19	ug/L			05/26/23 16:24	1
<b>m-Xylene &amp; p-Xylene</b>	<b>21</b>		0.50	0.12	ug/L			05/26/23 16:24	1
<b>n-Butylbenzene</b>	<b>2.2</b>		1.0	0.23	ug/L			05/26/23 16:24	1
<b>N-Propylbenzene</b>	<b>1.5</b>		0.30	0.091	ug/L			05/26/23 16:24	1
<b>o-Xylene</b>	<b>6.8</b>		0.50	0.15	ug/L			05/26/23 16:24	1
sec-Butylbenzene	ND		1.0	0.17	ug/L			05/26/23 16:24	1
tert-Butylbenzene	ND		0.50	0.26	ug/L			05/26/23 16:24	1
Tetrachloroethene	ND		0.50	0.084	ug/L			05/26/23 16:24	1
<b>Toluene</b>	<b>2.5</b>		0.20	0.050	ug/L			05/26/23 16:24	1
Trichloroethene	ND		0.20	0.066	ug/L			05/26/23 16:24	1
Vinyl chloride	ND		0.10	0.040	ug/L			05/26/23 16:24	1
<b>Xylenes, Total</b>	<b>28</b>		0.50	0.15	ug/L			05/26/23 16:24	1
Chlorobenzene	ND		0.20	0.060	ug/L			05/26/23 16:24	1
1,4-Dichlorobenzene	ND		0.30	0.050	ug/L			05/26/23 16:24	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	106		80 - 120		05/26/23 16:24	1
4-Bromofluorobenzene (Surr)	97		80 - 120		05/26/23 16:24	1
Dibromofluoromethane (Surr)	103		80 - 120		05/26/23 16:24	1
Toluene-d8 (Surr)	97		80 - 120		05/26/23 16:24	1

**Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Gasoline</b>	<b>190</b>		50	14	ug/L			05/24/23 23:01	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	106		77 - 123		05/24/23 23:01	1

**Method: SW846 8270E - Semivolatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		0.38	0.047	ug/L		05/24/23 09:18	05/25/23 13:41	1
Anthracene	ND		0.94	0.047	ug/L		05/24/23 09:18	05/25/23 13:41	1
Benzo[a]anthracene	ND		0.24	0.047	ug/L		05/24/23 09:18	05/25/23 13:41	1
Benzo[a]pyrene	ND		0.24	0.038	ug/L		05/24/23 09:18	05/25/23 13:41	1
Benzo[b]fluoranthene	ND		0.24	0.038	ug/L		05/24/23 09:18	05/25/23 13:41	1
Benzo[g,h,i]perylene	ND		0.24	0.038	ug/L		05/24/23 09:18	05/25/23 13:41	1
Chrysene	ND		0.24	0.085	ug/L		05/24/23 09:18	05/25/23 13:41	1
Fluoranthene	ND		0.24	0.057	ug/L		05/24/23 09:18	05/25/23 13:41	1
Fluorene	ND		0.24	0.047	ug/L		05/24/23 09:18	05/25/23 13:41	1

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# Client Sample Results

Client: Kiewit Infrastructure West Co.  
 Project/Site: Federal Way Link Extension\_05/23/23 FWTC  
 FW-A Raw

Job ID: 580-127526-1

**Client Sample ID: FWTC FW-A Raw**

**Lab Sample ID: 580-127526-1**

Date Collected: 05/23/23 13:50

Matrix: Water

Date Received: 05/23/23 14:37

**Method: SW846 8270E - Semivolatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1-Methylnaphthalene	0.43	J	0.94	0.047	ug/L		05/24/23 09:18	05/25/23 13:41	1
2-Methylnaphthalene	0.27	J	0.38	0.057	ug/L		05/24/23 09:18	05/25/23 13:41	1
Naphthalene	0.81		0.38	0.15	ug/L		05/24/23 09:18	05/25/23 13:41	1
Phenanthrene	ND		0.94	0.11	ug/L		05/24/23 09:18	05/25/23 13:41	1
Pyrene	ND		0.94	0.038	ug/L		05/24/23 09:18	05/25/23 13:41	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl	77		35 - 120	05/24/23 09:18	05/25/23 13:41	1
2-Fluorophenol (Surr)	42		21 - 120	05/24/23 09:18	05/25/23 13:41	1
Nitrobenzene-d5 (Surr)	106		39 - 120	05/24/23 09:18	05/25/23 13:41	1
Phenol-d5 (Surr)	32		10 - 120	05/24/23 09:18	05/25/23 13:41	1
Terphenyl-d14 (Surr)	109		63 - 137	05/24/23 09:18	05/25/23 13:41	1
2,4,6-Tribromophenol (Surr)	108		50 - 130	05/24/23 09:18	05/25/23 13:41	1

**Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	650		110	65	ug/L		05/24/23 09:33	05/24/23 20:58	1
Motor Oil (>C24-C36)	1500		350	96	ug/L		05/24/23 09:33	05/24/23 20:58	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
o-Terphenyl	71		50 - 150	05/24/23 09:33	05/24/23 20:58	1

**Method: NWTPH-Dx - Semi-Volatile Petroleum Products by NWTPH with Silica Gel Cleanup**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	150		110	65	ug/L		05/24/23 09:33	05/24/23 19:24	1
Motor Oil (>C24-C36)	910		350	96	ug/L		05/24/23 09:33	05/24/23 19:24	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
o-Terphenyl	68		50 - 150	05/24/23 09:33	05/24/23 19:24	1

**Method: EPA 200.8 - Metals (ICP/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	5.4		1.0	0.20	ug/L		05/26/23 17:00	05/30/23 16:23	1
Chromium	15		0.80	0.17	ug/L		05/26/23 17:00	05/30/23 16:23	1
Lead	8.2		0.40	0.040	ug/L		05/26/23 17:00	05/30/23 16:23	1

# QC Sample Results

Client: Kiewit Infrastructure West Co.  
 Project/Site: Federal Way Link Extension\_05/23/23 FWTC  
 FW-A Raw

Job ID: 580-127526-1

## Method: 8260D - Volatile Organic Compounds by GC/MS

**Lab Sample ID: MB 580-427180/7**  
**Matrix: Water**  
**Analysis Batch: 427180**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		0.50	0.17	ug/L			05/26/23 13:30	1
1,2,4-Trimethylbenzene	ND		0.50	0.20	ug/L			05/26/23 13:30	1
1,3,5-Trimethylbenzene	ND		0.50	0.15	ug/L			05/26/23 13:30	1
2-Butanone (MEK)	ND		10	2.5	ug/L			05/26/23 13:30	1
4-Isopropyltoluene	ND		0.50	0.15	ug/L			05/26/23 13:30	1
Acetone	ND		10	3.1	ug/L			05/26/23 13:30	1
Benzene	ND		0.20	0.030	ug/L			05/26/23 13:30	1
Carbon disulfide	ND		0.30	0.083	ug/L			05/26/23 13:30	1
cis-1,2-Dichloroethene	ND		0.20	0.055	ug/L			05/26/23 13:30	1
Ethylbenzene	ND		0.20	0.030	ug/L			05/26/23 13:30	1
Isopropylbenzene	ND		1.0	0.19	ug/L			05/26/23 13:30	1
m-Xylene & p-Xylene	ND		0.50	0.12	ug/L			05/26/23 13:30	1
n-Butylbenzene	ND		1.0	0.23	ug/L			05/26/23 13:30	1
N-Propylbenzene	ND		0.30	0.091	ug/L			05/26/23 13:30	1
o-Xylene	ND		0.50	0.15	ug/L			05/26/23 13:30	1
sec-Butylbenzene	ND		1.0	0.17	ug/L			05/26/23 13:30	1
tert-Butylbenzene	ND		0.50	0.26	ug/L			05/26/23 13:30	1
Tetrachloroethene	ND		0.50	0.084	ug/L			05/26/23 13:30	1
Toluene	ND		0.20	0.050	ug/L			05/26/23 13:30	1
Trichloroethene	ND		0.20	0.066	ug/L			05/26/23 13:30	1
Vinyl chloride	ND		0.10	0.040	ug/L			05/26/23 13:30	1
Xylenes, Total	ND		0.50	0.15	ug/L			05/26/23 13:30	1
Chlorobenzene	ND		0.20	0.060	ug/L			05/26/23 13:30	1
1,4-Dichlorobenzene	ND		0.30	0.050	ug/L			05/26/23 13:30	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	109		80 - 120		05/26/23 13:30	1
4-Bromofluorobenzene (Surr)	89		80 - 120		05/26/23 13:30	1
Dibromofluoromethane (Surr)	108		80 - 120		05/26/23 13:30	1
Toluene-d8 (Surr)	97		80 - 120		05/26/23 13:30	1

**Lab Sample ID: LCS 580-427180/4**  
**Matrix: Water**  
**Analysis Batch: 427180**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
1,2,4-Trichlorobenzene	5.00	4.35		ug/L		87	60 - 130
1,2,4-Trimethylbenzene	5.00	5.22		ug/L		104	71 - 127
1,3,5-Trimethylbenzene	5.00	5.22		ug/L		104	75 - 123
2-Butanone (MEK)	25.0	25.0		ug/L		100	37 - 150
4-Isopropyltoluene	5.00	5.28		ug/L		106	78 - 125
Acetone	25.0	26.3		ug/L		105	49 - 150
Benzene	5.00	5.38		ug/L		108	80 - 120
Carbon disulfide	5.00	5.32		ug/L		106	54 - 142
cis-1,2-Dichloroethene	5.00	5.49		ug/L		110	72 - 120
Ethylbenzene	5.00	5.55		ug/L		111	80 - 124
Isopropylbenzene	5.00	5.37		ug/L		107	71 - 123

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# QC Sample Results

Client: Kiewit Infrastructure West Co.  
 Project/Site: Federal Way Link Extension\_05/23/23 FWTC  
 FW-A Raw

Job ID: 580-127526-1

## Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

**Lab Sample ID: LCS 580-427180/4**  
**Matrix: Water**  
**Analysis Batch: 427180**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
m-Xylene & p-Xylene	5.00	5.59		ug/L		112	75 - 124
n-Butylbenzene	5.00	4.89		ug/L		98	69 - 127
N-Propylbenzene	5.00	5.24		ug/L		105	72 - 126
o-Xylene	5.00	5.31		ug/L		106	71 - 124
sec-Butylbenzene	5.00	5.31		ug/L		106	75 - 126
tert-Butylbenzene	5.00	5.05		ug/L		101	70 - 129
Tetrachloroethene	5.00	5.13		ug/L		103	75 - 124
Toluene	5.00	5.66		ug/L		113	80 - 126
Trichloroethene	5.00	5.12		ug/L		102	72 - 120
Vinyl chloride	5.00	6.01		ug/L		120	41 - 150
Xylenes, Total	10.0	10.9		ug/L		109	73 - 123
Chlorobenzene	5.00	5.44		ug/L		109	74 - 123
1,4-Dichlorobenzene	5.00	5.19		ug/L		104	71 - 129

Surrogate	LCS LCS		Limits
	%Recovery	Qualifier	
1,2-Dichloroethane-d4 (Surr)	100		80 - 120
4-Bromofluorobenzene (Surr)	99		80 - 120
Dibromofluoromethane (Surr)	99		80 - 120
Toluene-d8 (Surr)	104		80 - 120

**Lab Sample ID: LCSD 580-427180/5**  
**Matrix: Water**  
**Analysis Batch: 427180**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total/NA**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
1,2,4-Trichlorobenzene	5.00	4.57		ug/L		91	60 - 130	5	26
1,2,4-Trimethylbenzene	5.00	5.26		ug/L		105	71 - 127	1	23
1,3,5-Trimethylbenzene	5.00	5.30		ug/L		106	75 - 123	2	23
2-Butanone (MEK)	25.0	23.5		ug/L		94	37 - 150	6	35
4-Isopropyltoluene	5.00	5.34		ug/L		107	78 - 125	1	24
Acetone	25.0	25.1		ug/L		100	49 - 150	5	24
Benzene	5.00	5.19		ug/L		104	80 - 120	4	22
Carbon disulfide	5.00	5.07		ug/L		101	54 - 142	5	34
cis-1,2-Dichloroethene	5.00	5.16		ug/L		103	72 - 120	6	22
Ethylbenzene	5.00	5.14		ug/L		103	80 - 124	8	22
Isopropylbenzene	5.00	5.08		ug/L		102	71 - 123	6	23
m-Xylene & p-Xylene	5.00	5.20		ug/L		104	75 - 124	7	22
n-Butylbenzene	5.00	4.86		ug/L		97	69 - 127	1	24
N-Propylbenzene	5.00	5.31		ug/L		106	72 - 126	1	20
o-Xylene	5.00	4.95		ug/L		99	71 - 124	7	23
sec-Butylbenzene	5.00	5.39		ug/L		108	75 - 126	2	23
tert-Butylbenzene	5.00	5.03		ug/L		101	70 - 129	0	24
Tetrachloroethene	5.00	5.13		ug/L		103	75 - 124	0	20
Toluene	5.00	5.27		ug/L		105	80 - 126	7	20
Trichloroethene	5.00	4.93		ug/L		99	72 - 120	4	22
Vinyl chloride	5.00	5.82		ug/L		116	41 - 150	3	32
Xylenes, Total	10.0	10.2		ug/L		102	73 - 123	7	20

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# QC Sample Results

Client: Kiewit Infrastructure West Co.  
 Project/Site: Federal Way Link Extension\_05/23/23 FWTC  
 FW-A Raw

Job ID: 580-127526-1

## Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCSD 580-427180/5

Client Sample ID: Lab Control Sample Dup

Matrix: Water

Prep Type: Total/NA

Analysis Batch: 427180

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chlorobenzene	5.00	5.13		ug/L		103	74 - 123	6	21
1,4-Dichlorobenzene	5.00	5.28		ug/L		106	71 - 129	2	22
Surrogate		LCS %Recovery	LCS Qualifier	Limits					
1,2-Dichloroethane-d4 (Surr)		101		80 - 120					
4-Bromofluorobenzene (Surr)		96		80 - 120					
Dibromofluoromethane (Surr)		99		80 - 120					
Toluene-d8 (Surr)		103		80 - 120					

## Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC/MS)

Lab Sample ID: MB 580-426926/10

Client Sample ID: Method Blank

Matrix: Water

Prep Type: Total/NA

Analysis Batch: 426926

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	ND		50	14	ug/L			05/24/23 15:46	1
Surrogate		MB %Recovery	MB Qualifier	Limits		Prepared		Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)		95		77 - 123				05/24/23 15:46	1

Lab Sample ID: LCS 580-426926/13

Client Sample ID: Lab Control Sample

Matrix: Water

Prep Type: Total/NA

Analysis Batch: 426926

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline	1000	971		ug/L		97	55 - 148		
Surrogate		LCS %Recovery	LCS Qualifier	Limits					
4-Bromofluorobenzene (Surr)		107		77 - 123					

Lab Sample ID: LCSD 580-426926/14

Client Sample ID: Lab Control Sample Dup

Matrix: Water

Prep Type: Total/NA

Analysis Batch: 426926

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline	1000	999		ug/L		100	55 - 148	3	10
Surrogate		LCS %Recovery	LCS Qualifier	Limits					
4-Bromofluorobenzene (Surr)		102		77 - 123					

# QC Sample Results

Client: Kiewit Infrastructure West Co.  
 Project/Site: Federal Way Link Extension\_05/23/23 FWTC  
 FW-A Raw

Job ID: 580-127526-1

## Method: 8270E - Semivolatile Organic Compounds (GC/MS)

**Lab Sample ID: MB 580-426874/1-A**  
**Matrix: Water**  
**Analysis Batch: 427031**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 426874**

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Acenaphthene	ND		0.40	0.050	ug/L		05/24/23 09:18	05/25/23 10:58	1
Anthracene	ND		1.0	0.050	ug/L		05/24/23 09:18	05/25/23 10:58	1
Benzo[a]anthracene	ND		0.25	0.050	ug/L		05/24/23 09:18	05/25/23 10:58	1
Benzo[a]pyrene	ND		0.25	0.040	ug/L		05/24/23 09:18	05/25/23 10:58	1
Benzo[b]fluoranthene	0.0604	J	0.25	0.040	ug/L		05/24/23 09:18	05/25/23 10:58	1
Benzo[g,h,i]perylene	ND		0.25	0.040	ug/L		05/24/23 09:18	05/25/23 10:58	1
Chrysene	ND		0.25	0.090	ug/L		05/24/23 09:18	05/25/23 10:58	1
Fluoranthene	ND		0.25	0.060	ug/L		05/24/23 09:18	05/25/23 10:58	1
Fluorene	ND		0.25	0.050	ug/L		05/24/23 09:18	05/25/23 10:58	1
1-Methylnaphthalene	ND		1.0	0.050	ug/L		05/24/23 09:18	05/25/23 10:58	1
2-Methylnaphthalene	ND		0.40	0.060	ug/L		05/24/23 09:18	05/25/23 10:58	1
Naphthalene	ND		0.40	0.16	ug/L		05/24/23 09:18	05/25/23 10:58	1
Phenanthrene	ND		1.0	0.12	ug/L		05/24/23 09:18	05/25/23 10:58	1
Pyrene	ND		1.0	0.040	ug/L		05/24/23 09:18	05/25/23 10:58	1

Surrogate	MB	MB	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
2-Fluorobiphenyl	72		35 - 120	05/24/23 09:18	05/25/23 10:58	1
2-Fluorophenol (Surr)	52		21 - 120	05/24/23 09:18	05/25/23 10:58	1
Nitrobenzene-d5 (Surr)	94		39 - 120	05/24/23 09:18	05/25/23 10:58	1
Phenol-d5 (Surr)	35		10 - 120	05/24/23 09:18	05/25/23 10:58	1
Terphenyl-d14 (Surr)	102		63 - 137	05/24/23 09:18	05/25/23 10:58	1
2,4,6-Tribromophenol (Surr)	81		50 - 130	05/24/23 09:18	05/25/23 10:58	1

**Lab Sample ID: LCS 580-426874/2-A**  
**Matrix: Water**  
**Analysis Batch: 427031**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 426874**

Analyte	Spike Added	LCS	LCS	Unit	D	%Rec	Limits
		Result	Qualifier				
Acenaphthene	4.00	2.92		ug/L		73	41 - 120
Anthracene	4.00	3.72		ug/L		93	58 - 120
Benzo[a]anthracene	4.00	3.69		ug/L		92	48 - 131
Benzo[a]pyrene	4.00	3.55		ug/L		89	55 - 125
Benzo[b]fluoranthene	4.00	3.41		ug/L		85	54 - 124
Benzo[g,h,i]perylene	4.00	3.16		ug/L		79	46 - 124
Chrysene	4.00	3.46		ug/L		86	57 - 125
Fluoranthene	4.00	3.83		ug/L		96	60 - 121
Fluorene	4.00	3.30		ug/L		83	20 - 120
1-Methylnaphthalene	4.00	2.71		ug/L		68	36 - 120
2-Methylnaphthalene	4.00	2.66		ug/L		67	35 - 120
Naphthalene	4.00	2.47		ug/L		62	42 - 120
Phenanthrene	4.00	3.40		ug/L		85	54 - 120
Pyrene	4.00	3.83		ug/L		96	57 - 120

Surrogate	LCS	LCS	Limits
	%Recovery	Qualifier	
2-Fluorobiphenyl	71		35 - 120
2-Fluorophenol (Surr)	46		21 - 120
Nitrobenzene-d5 (Surr)	92		39 - 120

Eurofins Seattle

# QC Sample Results

Client: Kiewit Infrastructure West Co.  
 Project/Site: Federal Way Link Extension\_05/23/23 FWTC  
 FW-A Raw

Job ID: 580-127526-1

## Method: 8270E - Semivolatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: LCS 580-426874/2-A**  
**Matrix: Water**  
**Analysis Batch: 427031**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 426874**

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Phenol-d5 (Surr)	37		10 - 120
Terphenyl-d14 (Surr)	103		63 - 137
2,4,6-Tribromophenol (Surr)	97		50 - 130

**Lab Sample ID: LCSD 580-426874/3-A**  
**Matrix: Water**  
**Analysis Batch: 427031**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total/NA**  
**Prep Batch: 426874**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Acenaphthene	4.00	3.03		ug/L		76	41 - 120	4	35
Anthracene	4.00	3.86		ug/L		97	58 - 120	4	35
Benzo[a]anthracene	4.00	3.83		ug/L		96	48 - 131	4	35
Benzo[a]pyrene	4.00	3.79		ug/L		95	55 - 125	7	35
Benzo[b]fluoranthene	4.00	3.65		ug/L		91	54 - 124	7	35
Benzo[g,h,i]perylene	4.00	3.36		ug/L		84	46 - 124	6	35
Chrysene	4.00	3.53		ug/L		88	57 - 125	2	35
Fluoranthene	4.00	3.87		ug/L		97	60 - 121	1	35
Fluorene	4.00	3.62		ug/L		91	20 - 120	9	35
1-Methylnaphthalene	4.00	2.86		ug/L		71	36 - 120	5	35
2-Methylnaphthalene	4.00	2.74		ug/L		69	35 - 120	3	35
Naphthalene	4.00	2.65		ug/L		66	42 - 120	7	35
Phenanthrene	4.00	3.47		ug/L		87	54 - 120	2	35
Pyrene	4.00	3.90		ug/L		97	57 - 120	2	35

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
2-Fluorobiphenyl	66		35 - 120
2-Fluorophenol (Surr)	49		21 - 120
Nitrobenzene-d5 (Surr)	97		39 - 120
Phenol-d5 (Surr)	37		10 - 120
Terphenyl-d14 (Surr)	101		63 - 137
2,4,6-Tribromophenol (Surr)	97		50 - 130

## Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

**Lab Sample ID: MB 580-426877/1-A**  
**Matrix: Water**  
**Analysis Batch: 426944**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 426877**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	ND		110	65	ug/L		05/24/23 09:33	05/24/23 19:43	1
Motor Oil (>C24-C36)	ND		350	96	ug/L		05/24/23 09:33	05/24/23 19:43	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
o-Terphenyl	63		50 - 150	05/24/23 09:33	05/24/23 19:43	1

# QC Sample Results

Client: Kiewit Infrastructure West Co.  
 Project/Site: Federal Way Link Extension\_05/23/23 FWTC  
 FW-A Raw

Job ID: 580-127526-1

## Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC) (Continued)

**Lab Sample ID: LCS 580-426877/2-A**  
**Matrix: Water**  
**Analysis Batch: 426944**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 426877**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
#2 Diesel (C10-C24)	4000	3120		ug/L		78	50 - 120
Motor Oil (>C24-C36)	4000	3250		ug/L		81	64 - 120

Surrogate	LCS %Recovery	LCS Qualifier	Limits
<i>o</i> -Terphenyl	85		50 - 150

**Lab Sample ID: LCSD 580-426877/3-A**  
**Matrix: Water**  
**Analysis Batch: 426944**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total/NA**  
**Prep Batch: 426877**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
#2 Diesel (C10-C24)	4000	3400		ug/L		85	50 - 120	9	26
Motor Oil (>C24-C36)	4000	3610		ug/L		90	64 - 120	10	24

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
<i>o</i> -Terphenyl	93		50 - 150

## Method: NWTPH-Dx - Semi-Volatile Petroleum Products by NWTPH with Silica Gel Cleanup

**Lab Sample ID: MB 580-426877/1-B**  
**Matrix: Water**  
**Analysis Batch: 426944**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 426877**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	ND		110	65	ug/L		05/24/23 09:33	05/24/23 18:27	1
Motor Oil (>C24-C36)	ND		350	96	ug/L		05/24/23 09:33	05/24/23 18:27	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
<i>o</i> -Terphenyl	58		50 - 150	05/24/23 09:33	05/24/23 18:27	1

**Lab Sample ID: LCS 580-426877/2-B**  
**Matrix: Water**  
**Analysis Batch: 426944**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 426877**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
#2 Diesel (C10-C24)	4000	3080		ug/L		77	50 - 120
Motor Oil (>C24-C36)	4000	3320		ug/L		83	64 - 120

Surrogate	LCS %Recovery	LCS Qualifier	Limits
<i>o</i> -Terphenyl	86		50 - 150

**Lab Sample ID: LCSD 580-426877/3-B**  
**Matrix: Water**  
**Analysis Batch: 426944**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total/NA**  
**Prep Batch: 426877**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
#2 Diesel (C10-C24)	4000	3370		ug/L		84	50 - 120	9	26

Eurofins Seattle

# QC Sample Results

Client: Kiewit Infrastructure West Co.  
 Project/Site: Federal Way Link Extension\_05/23/23 FWTC  
 FW-A Raw

Job ID: 580-127526-1

## Method: NWTPH-Dx - Semi-Volatile Petroleum Products by NWTPH with Silica Gel Cleanup (Continued)

**Lab Sample ID: LCSD 580-426877/3-B**  
**Matrix: Water**  
**Analysis Batch: 426944**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total/NA**  
**Prep Batch: 426877**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Motor Oil (>C24-C36)	4000	3550		ug/L		89	64 - 120	7	24

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
<i>o</i> -Terphenyl	92		50 - 150

## Method: 200.8 - Metals (ICP/MS)

**Lab Sample ID: MB 580-427240/14-A**  
**Matrix: Water**  
**Analysis Batch: 427451**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 427240**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		1.0	0.20	ug/L		05/26/23 17:00	05/30/23 15:26	1
Chromium	ND		0.80	0.17	ug/L		05/26/23 17:00	05/30/23 15:26	1
Lead	ND		0.40	0.040	ug/L		05/26/23 17:00	05/30/23 15:26	1

**Lab Sample ID: LCS 580-427240/15-A**  
**Matrix: Water**  
**Analysis Batch: 427451**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 427240**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Arsenic	1000	1010		ug/L		101	85 - 115
Chromium	1000	1040		ug/L		104	85 - 115
Lead	1000	1010		ug/L		101	85 - 115

**Lab Sample ID: LCSD 580-427240/16-A**  
**Matrix: Water**  
**Analysis Batch: 427451**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total/NA**  
**Prep Batch: 427240**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Arsenic	1000	1010		ug/L		101	85 - 115	0	20
Chromium	1000	1040		ug/L		104	85 - 115	0	20
Lead	1000	1000		ug/L		100	85 - 115	1	20

# Lab Chronicle

Client: Kiewit Infrastructure West Co.  
 Project/Site: Federal Way Link Extension\_05/23/23 FWTC  
 FW-A Raw

Job ID: 580-127526-1

**Client Sample ID: FWTC FW-A Raw**

**Lab Sample ID: 580-127526-1**

**Date Collected: 05/23/23 13:50**

**Matrix: Water**

**Date Received: 05/23/23 14:37**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	427180	ITR	EET SEA	05/26/23 16:24
Total/NA	Analysis	NWTPH-Gx		1	426926	JBT	EET SEA	05/24/23 23:01
Total/NA	Prep	3510C			426874	TGO	EET SEA	05/24/23 09:18
Total/NA	Analysis	8270E		1	427031	SR	EET SEA	05/25/23 13:41
Total/NA	Prep	3510C			426877	TGO	EET SEA	05/24/23 09:33
Total/NA	Cleanup	3630C			426879	TGO	EET SEA	05/24/23 11:58
Total/NA	Analysis	NWTPH-Dx		1	426944	KLW	EET SEA	05/24/23 19:24
Total/NA	Prep	3510C			426877	TGO	EET SEA	05/24/23 09:33
Total/NA	Analysis	NWTPH-Dx		1	426944	KLW	EET SEA	05/24/23 20:58
Total/NA	Prep	200.8			427240	TMH	EET SEA	05/26/23 17:00
Total/NA	Analysis	200.8		1	427451	FCW	EET SEA	05/30/23 16:23

**Laboratory References:**

EET SEA = Eurofins Seattle, 5755 8th Street East, Tacoma, WA 98424, TEL (253)922-2310

# Accreditation/Certification Summary

Client: Kiewit Infrastructure West Co.  
Project/Site: Federal Way Link Extension\_05/23/23 FWTC  
FW-A Raw

Job ID: 580-127526-1

## Laboratory: Eurofins Seattle

The accreditations/certifications listed below are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Washington	State	C788	07-13-23

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11

# Sample Summary

Client: Kiewit Infrastructure West Co.  
Project/Site: Federal Way Link Extension\_05/23/23 FWTC  
FW-A Raw

Job ID: 580-127526-1

---

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
580-127526-1	FWTC FW-A Raw	Water	05/23/23 13:50	05/23/23 14:37

1

2

3

4

5

6

7

8

9

10

11



# Login Sample Receipt Checklist

Client: Kiewit Infrastructure West Co.

Job Number: 580-127526-1

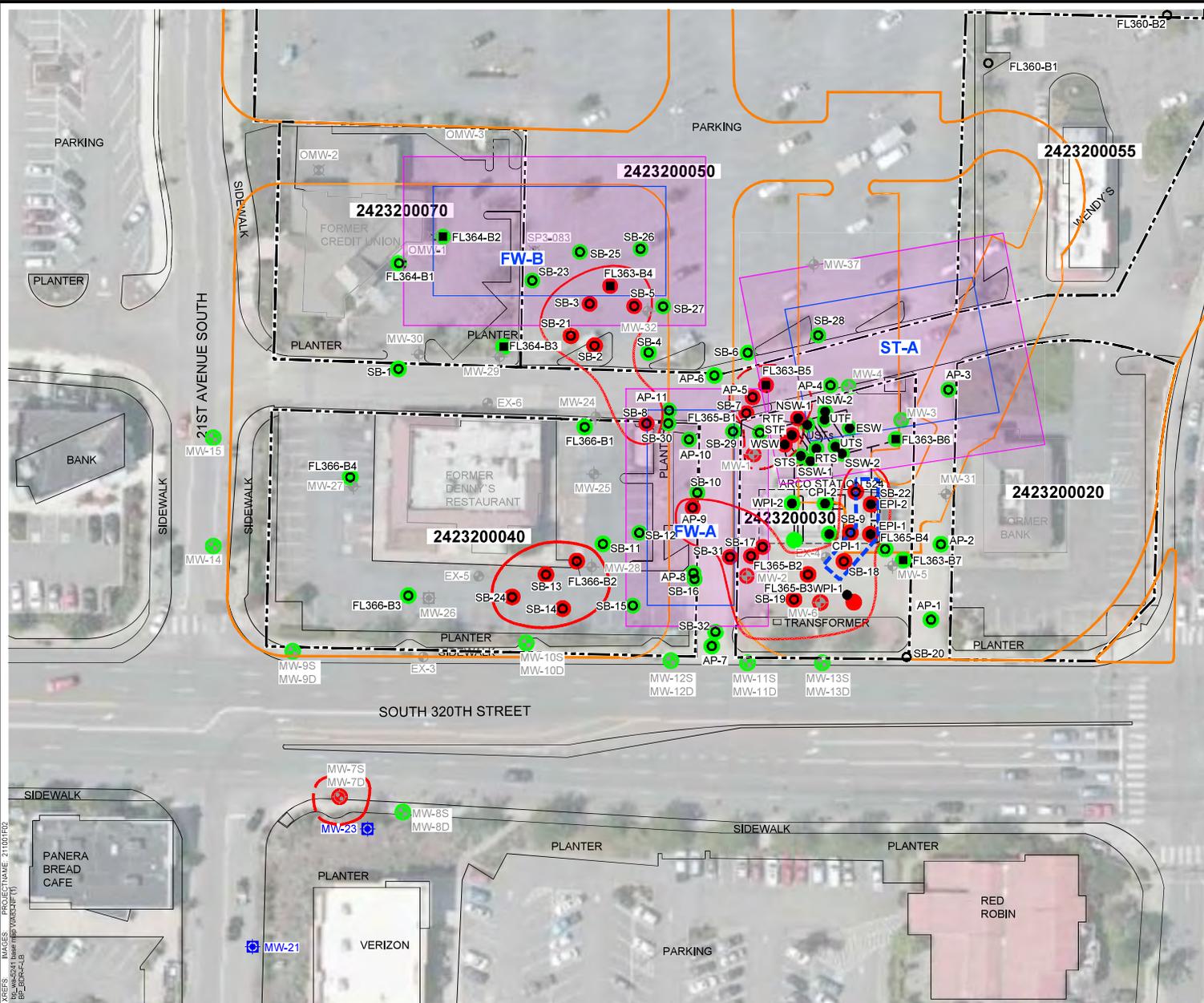
**Login Number: 127526**

**List Source: Eurofins Seattle**

**List Number: 1**

**Creator: Prigge, Madison**

Question	Answer	Comment
Radioactivity wasn't checked or is <math>\leq</math> background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	Received same day of collection; chilling process has begun.
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <math><6\text{mm}</math> (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	



**LEGEND:**

- CURRENT PARCEL BOUNDARY
- 2423200040 ASSESSOR'S PARCEL NUMBER (APN)
- POTENTIAL FUTURE PARCEL BOUNDARY
- MW-23 GROUNDWATER MONITORING WELL (DEEP)
- MW-5 ABANDONED GROUNDWATER MONITORING WELL (SHALLOW)
- MW-23 ABANDONED GROUNDWATER MONITORING WELL (DEEP)
- MW-7S ABANDONED DUAL COMPLETION WELL
- MW-7D ABANDONED DUAL COMPLETION WELL
- EX-5 ABANDONED EXTRACTION WELL
- OMW-1 ABANDONED OFF-SITE GROUNDWATER MONITORING WELL (FARALLON CONSULTING)
- FL363-B4 BORING WITH GROUNDWATER GRAB SAMPLE
- ESW DISCRETE SOIL SAMPLE
- FL360-B1 SOIL BORING
- CONSTITUENTS ANALYZED WERE BELOW MTCA METHOD A CLEANUP LEVELS
- ONE OF MORE CONSTITUENTS EXCEEDED MTCA METHOD A CLEANUP LEVELS
- MTCA HISTORICAL MODEL TOXICS CONTROL ACT
- HISTORICAL MTCA BOUNDARY FOR SOIL (DASHED WHERE INFERRED)
- REMEDIAL EXCAVATION FOOTPRINT
- EXCAVATION LIMITS
- VAULT LIMITS

0 60' 120'  
 APPROXIMATE SCALE : 1 in. = 60 ft.

FORMER ARCO FACILITY 5241  
 2202 SOUTH 320th STREET  
 FEDERAL WAY, WASHINGTON

**MEMORANDUM OF UNDERSTANDING  
 EXHIBIT A**

**ARCADIS**

FIGURE  
**A**

**APPENDIX B**  
**2017 Phase II ESA Excerpts**

December 2017

FEDERAL WAY LINK EXTENSION

AE 0044-12 3.7.N

Phase II Environmental Site  
Assessment

FL358, FL361 and FL363

Draft 2

Tax Parcels 2423200050,  
2423200010 and 2423200060



CENTRAL PUGET SOUND  
REGIONAL TRANSIT AUTHORITY

**Phase II Environmental Site Assessment Report  
Sound Transit – Federal Way Link Extension  
Parcels FL358, FL361 and FL363  
Sea-tac Plaza Shopping Center  
2200 South 320<sup>th</sup> Street  
Federal Way, Washington**

**File No. 4082-039-01**

**December 19, 2017**

Prepared for:

Sound Transit c/o HDR Engineering  
401 South Jackson Street  
Seattle, Washington 98104-2826  
Attention: Mark Menard

Prepared by:

GeoEngineers, Inc.  
1101 South Fawcett Avenue, Suite 200  
Tacoma, Washington 98402  
253.383.4940

  
\_\_\_\_\_  
Ian D. Young, LG  
Geologist

  
\_\_\_\_\_  
Dana L. Carlisle, PE  
Principal

IDY:DLC:ch

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## Acronyms and Abbreviations

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AST	aboveground storage tank
ASTM	ASTM International
bgs	below ground surface
CLARC	Cleanup Levels and Risk Calculation
Ecology	Washington State Department of Ecology
EPA	United States Environmental Protection Agency
ESA	environmental site assessment
HREC	Historical Recognized Environmental Condition
mg/kg	milligrams per kilogram
MTCA	Model Toxics Control Act
NAVD 88	North American Vertical Datum of 1988
PAH	polycyclic aromatic hydrocarbon
PCBs	polychlorinated biphenyls
PID	photoionization detector
ppm	parts per million
PRT	post-run tubing
QC	quality control
RCRA	Resource Conservation and Recovery Act
REC	Recognized Environmental Condition
TSP	Tacoma Smelter Plume
UST	underground storage tank
VOC	volatile organic compound
WAC	Washington Administrative Code

# EXECUTIVE SUMMARY

---

This report summarizes the results of the All Appropriate Inquiries (AAI) Phase I Environmental Site Assessment (ESA) of the property at 2200 South 320<sup>th</sup> Street in Federal Way, Washington, contiguous King County Tax Parcels 2423200050, 2423200010 and 2423200060 identified by Central Puget Sound Regional Transit Authority (Sound Transit) as Federal Way Link Extension (FWLE) Parcels FL358, FL361 and FL363, respectively. The subject property is owned by Winson at Federal Way, LLC. The subject property is shown relative to surrounding physical features on the Vicinity Map, Figure 1.

The three parcels comprise 8.84 acres and are collectively referred to in this report as “subject property.” Parcel FL358 is the largest of the three parcels (7.5 acres) and is developed with the Sea-Tac Plaza shopping center built in 1979. The shopping center building comprises approximately 107,000 square feet and the remainder of the parcel is paved parking. Parcel FL363 represents access roads into and through the shopping center, with a small portion used for parking. Parcel FL361, adjacent to the northeast corner of FL363, is used for additional shopping center parking and landscaping. The layout of the subject property and surrounding properties is shown on the Site Plan, Figure 2. Prior to the shopping center, parking and access roads being developed, the subject property was part of a large tract with three small, rural residences in a portion of the subject property in the late 1940s and 1950s and a drainage channel extended through a portion of the subject property.

The Phase II ESA was conducted to assess current soil and groundwater conditions relative to Sound Transit’s proposed acquisition and construction on the subject property. Sound Transit’s proposed construction and development is generally shown in Figure 3. Contamination associated with the Recognized Environmental Conditions (RECs) for the property as identified in the Phase I ESA prepared by GeoEngineers, Inc. dated March 2017 was evaluated during this Phase II ESA study.

A limited scope of sampling to assess soil related to potential Tacoma Smelter Plume (TSP) impacts was performed as part of the Phase II ESA and additional sampling of this nature is planned in the future. Results from the TSP-related soil sampling.

## Phase I ESA Summary

The following RECs were identified for the subject property:

- The Y Pay Mor Dry Cleaner previously occupied space in the east end of the Sea-Tac Plaza shopping center and is a MTCA cleanup Site with a documented release of dry cleaning solvents that was remediated in 1994. Ecology issued a No Further Action (NFA) determination dated October 22, 1998 conditioned on a Restrictive Covenant which documents residual contamination in soil and groundwater remaining beneath the Site.
- Petroleum contamination is documented in soil and in groundwater beneath the southern portion of the subject property due to contaminant migration from releases at the southern adjacent ARCO service station MTCA cleanup Site.

A detailed summary of available environmental assessment and cleanup history information, and regulatory status associated with each of these Sites, is presented in Sections 1.3.1 and 1.3.2.

The Phase I ESA noted the presence of fill in the vicinity of the subject property, based on observations made during geotechnical explorations conducted along the FWLE corridor. Assessment of fill as a potential source of contaminants on the subject property is planned in the future. Additional shallow soil sampling to evaluate the TSP is also planned in the future and potential TSP impacts will be presented in a separate document in the future.

## **Phase II ESA Findings and Conclusions**

The Phase II ESA was conducted to assess current soil and groundwater conditions relative to Sound Transit's proposed acquisition and construction on the subject property. Contamination associated with the Recognized Environmental Conditions (RECs) for the property as identified in the Phase I ESA prepared by GeoEngineers, Inc. dated March 2017 was evaluated during this study.

### **Current Site Conditions**

No newly identified potential on-site sources of contamination were noted during the Phase II ESA visual reconnaissance of the subject property in October 2017. Previously installed groundwater monitoring well Y Pay Mor-MW3 was located (Figure 2 and Figure 4), while previous monitoring well Y Pay Mor-MW2 was not located and is assumed to have either been removed or paved over. Monitoring wells previously installed for assessment of the past ARCO release were observed on the subject property including ARCO-MW31, ARCO-MW32, ARCO-MW37 and ARCO-MW4 (Figure 2). It is unclear whether remediation wells previously installed for the ARCO cleanup remain on the subject property.

A survey of the subject property presented in Appendix C indicates the locations of storm drain and sanitary sewer easements that cross portions of the subject property and may contribute to preferential pathways for contaminant migration in groundwater or soil vapor.

### **Potential On-site Sources - Former Y Pay Mor Dry Cleaners**

Y Pay Mor Dry Cleaners was a tenant in the subject property shopping center on FL358 between approximately the late 1980s and 1994. The dry cleaner was located at the east end of the Sea-Tac Plaza shopping center building, approximately as indicated in Figure 2.

Based on our review of available documents provided by Ecology (Appendix C), a spill of tetrachloroethylene (PCE) occurred inside the dry cleaner space in 1991. Site assessment completed in 1992 included limited sampling of soil and groundwater beneath and surrounding the dry cleaner space. PCE (1,700 µg/l) was detected in a groundwater sample obtained from beneath the dry cleaner space (B-12, Figure 4). A soil vapor extraction (SVE) remediation system operated beneath the dry cleaner space in 1993 and 1994. Post-remediation compliance sampling included 1994 soil sampling from borings inside the dry cleaner and 1994 and 1997 groundwater sampling at downgradient

monitoring well Y Pay Mor-MW3 (Figures 2 and 4). The concentration of PCE in one of the 1994 soil samples from inside the dry cleaner space (CB-4, Figure 4) was 1.3 mg/kg, greater than the MTCA Method A cleanup level of 0.05 mg/kg. Concentrations of PCE and its degradation compounds trichloroethylene (TCE), cis-1,2-dichloroethene (cis-1,2-DCE) and vinyl chloride in groundwater samples from 1994 and 1997 were less than MTCA cleanup levels (Figure 4).

In 1995 Ecology issued an interim NFA (Ecology, June 9, 1995) conditional on the recording of a restrictive covenant (Appendix C). The 1995 covenant documents that residual concentrations of solvents remained in soil and groundwater at the site at levels exceeding MTCA Method A cleanup levels. Ecology issued a final NFA (October 23, 1998) for Y Pay Mor Dry Cleaners, conditioned on a second Restrictive Covenant recorded in August 1998 (Appendix C). The 1998 covenant outlines the conditions required to preserve Ecology's NFA determination for the former dry cleaner Site. Ecology's file does not contain any soil or groundwater sampling results for the Y Pay Mor Site after 1997.

### **Field Explorations, Sampling and Chemical Analytical Testing**

The vicinity of the former Y Pay Mor Dry Cleaner was assessed for this study by completing six exploration borings (FL358-B1, FL358-B3, FL358-MW1, FL358-MW2, FL358-MW3 and FL358-MW4), four of which were completed as monitoring wells. Soil samples were obtained from all six explorations and selected samples were submitted for chemical analysis. Groundwater samples were obtained from the four newly installed monitoring wells FL358-MW-1, FL358-MW-2, FL358-MW-3 and FL358-MW-4 and from one previously installed monitoring well, Y Pay Mor-MW3. Monitoring wells FL358-MW-3, FL358-MW-4 and Y Pay Mor-MW3 are in nearby downgradient locations, to the south and southwest, relative to the former dry cleaner space. Volatile organic compounds (VOCs) were also analyzed in downgradient groundwater samples obtained from the south/southwest margins of the subject property (grab water samples from FL363-B4, FL363-B5, FL363-B6 and FL363-B7 and monitoring well samples from ARCO-MW31 on FL363, and ARCO-MW32 and ARCO-MW37 on FL358) to confirm the presence/absence of dry cleaner-related solvents in groundwater at these downgradient locations on the subject property. No explorations were completed inside the shopping center building.

Below is a summary of key findings relative to the Phase II ESA objectives for the Y Pay Mor Dry Cleaner Site. Phase II ESA analytical results are summarized in Tables 1 and 2 and illustrated in Figures 5 and 6.

### **Soil**

- Nineteen soil samples from six explorations completed in close proximity to the former dry cleaner were analyzed for the dry-cleaning solvent PCE and breakdown products TCE, cis-1,2-DCE and vinyl chloride (Table 1). Depths sampled ranged from 0.5 to 19 feet bgs. PCE, TCE and cis-1,2-DCE were all detected in three samples from two of the borings: FL358-B1-10-11, FL358-B1-13-14 and FL358-MW1-19-20. Cis-1,2-DCE only was additionally detected in a fourth sample, also from FL358-B1: FL358-B1-5-6. The PCE concentration in sample FL358-B1-13-14 (0.066 mg/kg) was greater than the MTCA Method A cleanup level of 0.05 mg/kg. Concentrations of PCE in the remaining samples and the TCE and cis-1,2-DCE concentrations

were all less than the corresponding MTCA Method A cleanup levels. Vinyl chloride was not detected in the soil samples tested.

- Based on the 1994 soil confirmation testing beneath the dry cleaner space, and the Phase II ESA boring soil sample results, PCE remains in soil in at least two locations – beneath the building footprint (CB-4) and outside the building north of the dry cleaner space (FL358-B1 at 13 to 14 feet bgs) at concentrations greater than the MTCA Method A cleanup level. Figure 5 generally illustrates the distribution of dry cleaner solvents in soil at concentrations greater than MTCA cleanup levels. The full lateral and vertical extent of residual PCE in soil has not been assessed.
- Detections of PCE, TCE and cis-1,2-DCE in soil appear to be related to a past release(s) associated with the former on-site dry cleaner. Spent dry cleaning solvent such as PCE would be considered an F002-listed Dangerous Waste under the State Dangerous Waste Regulations Chapter 173-303 WAC. Soil from the Site with detections of PCE, or its degradation products TCE and/or cis-1,2-DCE, that may be excavated in the future would likely also classify as F002-listed Dangerous Waste necessitating special handling, transport, tracking and disposal. Soil from the saturated zone within the area where groundwater has detectable concentrations of dry cleaning solvents (see below), would likely also be classified as dangerous waste.
- Relatively low concentrations of the following VOCs were detected in one or more of the October 2017 soil samples (Table 1): 2-butanone (MEK), acetone, carbon disulfide, and p-isopropyltoluene. The detected concentrations of these VOCs were significantly less than MTCA cleanup levels, where established, and therefore were not considered further with regard to the Phase II ESA conclusions. These compounds are suspected to be related to laboratory procedures or laboratory or field sampling variability. Lube oil-range petroleum hydrocarbons (FL358-MW1-1.5-2.5, 100 mg/kg and FL358-MW1-5-6, 79 mg/kg), benzene (FL358-B1-5-6, 0.0010 mg/kg) and ethylbenzene (FL358-B3-12-13, 0.0014 mg/kg) were also detected but at very low concentrations that are just slightly above laboratory detection limits and significantly less than MTCA cleanup levels and therefore were not considered further with regard to the Phase II ESA conclusions for the vicinity of the former dry cleaner.

### **Groundwater**

- The depth to groundwater measured in the existing and new monitoring wells in October 2017 ranged from 7.2 to 7.5 feet bgs.
- Five monitoring wells in close proximity to the former dry cleaner (FL358-MW1, FL358-MW2, FL358-MW3 [sampled in duplicate], FL358-MW4 and Y Pay Mor-MW3) were analyzed for the dry-cleaning solvent PCE and breakdown products TCE, cis-1,2-DCE and vinyl chloride (Table 2). PCE, TCE and cis-1,2-DCE were detected in the October 2017 sample from FL358-MW1; the detected concentrations were less than the corresponding MTCA Method A/B cleanup levels. Cis-1,2-DCE only was detected in two additional monitoring well samples, FL358-MW4 and Y Pay Mor-MW3; the detected concentrations were less than the MTCA Method B cleanup level.

The October 2017 result for cis-1,2-DCE at Y Pay Mor-MW3 (0.20 µg/l), was approximately an order of magnitude lower than the cis-1,2-DCE concentrations reported for Y Pay Mor-MW3 based on 1997 sampling of this well (see Figure 4). Although dry cleaning solvents were not detected in the Phase II ESA groundwater samples at concentrations greater than MTCA cleanup levels, groundwater directly beneath the former dry cleaner space was not assessed during the study and was previously documented to exceed the MTCA Method A cleanup level for PCE, generally as shown in Figure 6. The prior remediation system (SVE) is believed to have only been used to treat areas of soil beneath the building footprint.

- Groundwater from the Site with detections of PCE or its breakdown products TCE and/or cis-1,2-DCE that may be recovered in the future through dewatering would likely classify as F002-listed Dangerous Waste necessitating special handling, transport, tracking and disposal/discharge.
- PCE, TCE and cis-1,2-DCE were not detected in the downgradient groundwater samples obtained in October 2017 from the south margin of FL358 and on FL363 (grab water samples from FL363-B4, FL363-B5, FL363-B6 and FL363-B7 and monitoring well samples from ARCO-MW31 and ARCO-MW32 and ARCO-MW37), as illustrated in Figure 6.

### **Potential Off-site Sources - ARCO**

The ARCO parcel (identified as FL365) is surrounded to the north, west and east by subject parcel FL363. A release of gasoline from the ARCO UST system was discovered in 1991. Widespread gasoline impacts from the ARCO release were identified in soil and groundwater on the ARCO parcel and adjacent and surrounding parcels including downgradient locations to the south and southwest. The extent of the ARCO-related gasoline plume limits in groundwater as of 2015, based on reports available in Ecology's file, is illustrated in Figure 2 and was interpreted at that time to extend west and north of the ARCO parcel onto FL363. In-situ cleanup methods, primarily fluids or vapor extraction technologies, were used at various times in the past through 2012. Documents in Ecology's file for the ARCO Site include a May 2012 "Further Action" letter and a 2014 Remedial Investigation (RI) Work Plan. The ARCO Site was entered into Ecology's Voluntary Cleanup Program (VCP) as of 2000; however, the ARCO Site was terminated from the VCP in February 2017.

### **Field Explorations, Sampling and Chemical Analytical Testing**

Soil and groundwater on the subject property in the vicinity of the ARCO located on the adjacent property were assessed for the Phase II ESA study by obtaining soil and grab water samples from four new exploration borings (FL363-B4, FL363-B5, FL363-B6 and FL363-B7) and sampling groundwater from three previously installed monitoring wells: ARCO-MW31 on FL363, and ARCO-MW32 and ARCO-MW37 on FL358. The primary purpose of the sampling was to evaluate the current extent of petroleum-related impacts in soil and groundwater resulting from the gasoline release at the ARCO service station. Phase II ESA explorations FL363-B4, FL363-B5, FL363-B6 and FL363-B7 were situated to evaluate the extent of the plume to the north/northwest and east of the ARCO parcel.

Below is a summary of key findings relative to the subject property Phase II ESA objectives for the ARCO Site. Phase II ESA analytical results are summarized in Tables 3 and 4 and illustrated in Figures 5 and 6.

### **Soil**

- Thirteen soil samples from four explorations completed on FL358 and FL363, north/northwest and east of the ARCO parcel were analyzed for petroleum hydrocarbons, BETX and other VOCs, PAHs and select metals. Depths sampled ranged from 5.5 to 19 feet bgs. Gasoline-range hydrocarbons, BETX constituents and/or common gasoline-related VOCs (e.g., trimethylbenzenes, isopropylbenzenes, isopropyltoluene, butylbenzenes, and naphthalenes) were detected in eleven different soil samples from the four borings (Table 3). The detected concentrations exceeded the corresponding MTCA Method A cleanup levels in the following three samples from two of the four borings: FL363-B4-11-12 (gasoline-range hydrocarbons 73 mg/kg), FL363-B4-12-13 (gasoline-range hydrocarbons 1,300 mg/kg and xylenes 22.8 mg/kg), and FL363-B5-11.5-12.5 (gasoline-range hydrocarbons 500 mg/kg and ethylbenzene 11 mg/kg). The presence of gasoline-related soil contamination greater than MTCA cleanup levels at these locations and depths is not unexpected based on results from the prior ARCO studies. Soil sample results at FL363-B6 and FL363-B7 located directly east of the ARCO parcel did not identify gasoline-related constituents at concentrations greater than MTCA cleanup levels. This finding is consistent with the prior studies and available groundwater plume data indicating that the ARCO release did not extend offsite to the east of the ARCO parcel at concentrations greater than MTCA cleanup levels.
- Diesel and/or lube oil-range petroleum hydrocarbons and a limited number of non-carcinogenic PAHs commonly associated with petroleum hydrocarbons were detected in eight soil samples from three of the four borings at concentrations less than MTCA Method A cleanup levels. These detections may be related to the ARCO service station, or to stormwater conveyance system leaks or fill material.
- Relatively low concentrations of the following other VOCs were detected in one or more of the October 2017 soil samples (Table 3): 2-butanone (MEK), acetone and carbon disulfide. The detected concentrations were significantly less than MTCA cleanup levels. The compounds are suspected to be related to laboratory procedures or variability and therefore were not considered further with regard to the Phase II ESA conclusions.

### **Groundwater**

- The depth to groundwater measured in the existing ARCO monitoring wells located on the subject property in October 2017 ranged from 9.7 to 12.4 feet bgs.
- Gasoline-range hydrocarbons, BETX constituents and/or common gasoline-related VOCs (e.g., trimethylbenzenes, propylbenzenes, butylbenzenes, isopropyltoluene, and naphthalenes) were detected in the October 2017 groundwater samples from FL363-B4 and FL363-B5 (Table

4). The detected concentrations exceeded the corresponding MTCA Method A cleanup levels as follows: FL363-B4 (gasoline-range hydrocarbons 24,000 µg/l; 1,3,5-trimethylbenzene 230 µg/l; naphthalenes 233 µg/l; and total xylenes 2,800 µg/l) and FL363-B5 (gasoline-range hydrocarbons 7,200 µg/l and benzene 510 µg/l). The presence of gasoline-related groundwater contamination greater than MTCA cleanup levels at these locations had not been previously documented based on the prior ARCO studies; however, the results are not unexpected given the proximity of the ARCO gasoline USTs at the north end of the ARCO parcel near FL363-B5 and the potential for contaminant migration via preferential utility pathways that may exist in the FL363 access road. Figure 2 shows revised plume boundaries based on interpretation of the most recent 2017 groundwater sampling data from FL363 and FL358 as well as other nearby FWLE parcels.

- Gasoline-related constituents were not detected in the groundwater samples from FL363-B6, FL363-B7, ARCO-MW-31, ARCO-MW-32 and ARCO-MW-37 (Figure 6). These findings are generally consistent with the prior studies and available groundwater plume data.
- Diesel- and/or lube oil-range petroleum hydrocarbons were detected at concentrations greater than MTCA Method A cleanup levels in groundwater samples from FL363-B4 and FL363-B5. Laboratory reports indicate that the diesel-range petroleum hydrocarbon results for these samples are due to gasoline extending in to the range quantified as diesel. Select PAH compounds (other than naphthalenes) were also detected at concentrations less than MTCA Method A cleanup levels in sample FL363-B4.
- Diesel- and/or lube oil-range petroleum hydrocarbons were detected at concentrations less than MTCA Method A cleanup levels in groundwater samples from FL363-B6, ARCO-MW32 and ARCO-MW37. These detections may be related to the ARCO service station or to other possible sources such as stormwater or fill.
- The VOC 1,3-dichlorobenzene was detected in one groundwater sample: FL363-B6 (0.31 µg/l). There is no published MTCA cleanup level for this compound in groundwater. The source of this VOC is unclear and would require additional sampling and analysis to evaluate further.
- Total lead was detected in all four grab groundwater samples at concentrations ranging from 29 to 180 µg/l, greater than the MTCA Method A cleanup level of 15 µg/l. Grab groundwater samples analyzed for total lead may be influenced by suspended sediment in the samples. Total lead was either not detected or was less than the MTCA Method A cleanup level in the three ARCO groundwater monitoring well samples collected for the Phase II ESA.

## **Sound Transit Acquisition and Future Construction Recommendations**

Based on current design information for the FWLE project (HDR, provided in October 2017), Sound Transit plans to acquire parcels FL358, FL361 and FL363 and in full, with building impacts to existing structures. Sound Transit's proposed construction and development on the property includes portions

of the future Federal Way Transit Center and parking garage, new roads and utilities, a large stormwater vault and the light rail track, columns and guideway structure. The proposed footprint of the new structures is shown in Figure 3. Proposed construction and development activities by Sound Transit could change as project design is refined.

Assessment of fill as a potential source of contaminants on the subject property is planned in the future and will be presented in a future deliverable. Also, additional assessment of potential TSP impacts is planned for portions of the subject property not explored during the Phase II ESA. The data collected during this Phase II ESA effort will be evaluated with sample data obtained from the remainder of the property and summarized in a future deliverable.

### **Acquisition Conclusions and Recommendations**

- The findings of the Phase II ESA indicate that a remediation cost estimate for cleanup is necessary for FL358, FL361 and FL363 for Sound Transit's acquisition because contaminants of concern related to a former on-site dry cleaner (Y Pay Mor Dry Cleaner) with a past documented release of PCE to soil and groundwater were confirmed to remain at concentrations greater than MTCA Method A cleanup levels in the vicinity of the former dry cleaner, and remain beneath the building footprint where the dry cleaner was located according to the Restrictive Covenants (see Section 1.3.1 and copies of the Restrictive Covenants in Appendix C).
- We recommend resampling of the permanent monitoring wells on the subject property to assess seasonal variability. Additionally, the permanent monitoring wells should be surveyed and depth to groundwater measurements obtained to assess groundwater gradient.
- We recommend a remedial investigation data gaps evaluation be completed to identify the site characterization data gaps that would need to be filled in order to evaluate remedial alternatives and select a preferred cleanup remedy under MTCA. Site investigation data gaps include the lateral and vertical extent of residual PCE and related compounds in soil and groundwater, hydrogeologic conditions relative to potential shallow and deeper aquifer systems, the potential for contaminant migration via preferential pathways such as underground utility corridors or fill, as well as the potential for indoor air vapor intrusion relative to the existing shopping center building.
- The Phase II ESA generally confirmed that the southern/southwestern downgradient extent of PCE and related contaminants in groundwater is within approximately 100 feet or less of the former dry cleaner location on FL358 and potentially FL363, and does not appear to extend onto the southern/southwestern-adjacent Wendy's restaurant parcel (FL360) at concentrations greater than MTCA Method A cleanup levels.
- Sound Transit's acquisition and redevelopment on the property will need to consider the 1995 and 1998 Restrictive Covenants that are recorded for the subject property and appear on the recent title report (Appendix C). Among the requirements of the covenants, the 1998 Covenant

prohibits activities that interfere with the integrity of the remedial action and continued protection of human health and the environment.

- We recommend Sound Transit consult with real estate and environmental legal counsel with respect to the potential purchase of the property, given the recorded covenants and their requirements, as well as potential cleanup cost recovery under MTCA.
- If Sound Transit acquires the property, we recommend that Sound Transit determine Ecology's expectations relative to the former dry cleaner Site, because MTCA and industry practices in relation to NFA determinations and institutional controls have evolved and changed since 1998. For example, we were unable to determine if Ecology has conducted a Periodic Review of the Y Pay Mor Site cleanup, as required in WAC 173-340-420. Under this section of MTCA, Ecology typically considers the effectiveness of the completed cleanup, as well as new information about current and project site uses. Consultation with Ecology also is recommended because the 1998 covenant prohibits any activity that may result in the release or exposure of hazardous substances that remain on the property without prior written approval from Ecology.
- The Y Pay Mor Dry Cleaners is identified in Ecology's confirmed and suspected contaminated sites database. The Phase II ESA findings do not indicate evidence of a new MTCA release, in our opinion.
- The Phase II ESA identified gasoline-related contaminants in soil and groundwater likely related to the ARCO Site. Appropriate cleanup methods and associated costs are directly tied to cleanup of the source property (ARCO). A remediation cost estimate for the subject property should be developed based on cleanup cost estimates for the ARCO MTCA Cleanup Site.

#### **Future Construction Recommendations**

- An environmental cost estimate will be necessary for Sound Transit's planned construction because dry cleaner-related impacted soil and groundwater will likely be encountered beneath and in the vicinity of the former dry cleaner. Additionally, petroleum-impacted soil and groundwater are anticipated near the ARCO Site, and potentially may be present in other locations on the subject property, from potential sources including fill or contaminants associated with stormwater.
- We recommend that fill, presumably placed to level out historic drainage features previously located on the subject property, be further evaluated for potential fill-related contaminants because there is extensive future excavation planned on the subject property associated with the stormwater vault and other proposed features. Excavation will generate soil that may not be suitable for reuse on the subject property or in another area of the FWLE project. The historic drainage features include a drainage channel approximately as shown in Figure 2 and a historic topographic low that existed in the southwestern portion of FL358 as of 1974, before the shopping center development.

- Sound Transit will need to carefully consider the sequencing of the dry cleaner Site cleanup in relation to future redevelopment excavation, backfilling and potential dewatering, to minimize potential recontamination occurrences, and to mitigate the potential for redevelopment to exacerbate existing contamination or contamination migration and result in added costs to Sound Transit.
- As noted in the Findings discussion above, soil and groundwater with detections of spent dry cleaning solvent such as PCE and related breakdown products would be considered an F002-listed Dangerous Waste (Chapter 173-303 WAC) if excavated or removed during future property redevelopment, necessitating added costs for handling, testing, transport, tracking and disposal/discharge.
- We recommend an impacted soil and groundwater handling plan be prepared prior to construction activities that outlines soil segregation, handling, stockpiling, and end use/disposal, as well as groundwater handling procedures for fluids recovered by dewatering. Follow-up chemical analytical testing will likely be needed for waste profiling and discharge/disposal waste acceptance and permitting. Ecology’s “Guidance for Remediation of Petroleum-Contaminated Soil” should be used as a guidance document for soil handling end use options for petroleum-related soil impacts. Additional regulatory requirements will apply if dry cleaner-related chlorinated solvents, which may classify as a F002-listed waste under the State Dangerous Waste Regulations are encountered in excavated soil or in groundwater recovered during dewatering.

The table below summarizes the Phase II ESA findings for the former dry cleaner and the ARCO Sites, and potentially impacted fill, relative to Sound Transit’s proposed acquisition and future construction.

Potential Sources of Contamination	Potential Source Within Acquisition Area	Potential Source Within Construction Area	Contaminated Soil and Groundwater Present	Impacted Soil and Groundwater Present	Remedial Cost Estimate Necessary For Acquisition	Remedial Cost Estimate Necessary For Construction
<b>On-Site Sources:</b> Former Y Pay Mor Dry Cleaner	Yes	Yes	Yes	Yes	Yes	Yes
<b>Other On-site Potential Sources:</b> Fill of unknown origin	Yes	Yes	Further assessment recommended	Further assessment recommended	Not likely	Potentially needed
<b>Off-Site Sources:</b> ARCO service station	Not on FL358, FL361 or FL363	Not on FL358, FL361 or FL363	Yes	Yes	Yes	Yes

*This Executive Summary should be used only in the context of the full report for which it is intended.*

# 1.0 Introduction

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This report presents the results of the Phase II Environmental Site Assessment (ESA) of the property at 2200 South 320<sup>th</sup> Street in Federal Way, Washington, contiguous King County Tax Parcels 2423200050, 2423200010 and 2423200060 identified by Central Puget Sound Regional Transit Authority (Sound Transit) as Federal Way Link Extension (FWLE) Parcels FL358, FL361 and FL363, respectively. The three parcels comprise 8.84 acres and are collectively referred to in this report as “subject property.” Parcel FL358 is the largest of the 3 parcels (7.5 acres) and is developed with the Sea-Tac Plaza shopping center and parking built in 1979. The shopping center building comprises approximately 107,000 square feet. Parcel FL363 represents access roads into and through the shopping center, with a small portion used for parking. Parcel FL361, adjacent to the northeast corner of FL363, is used for additional shopping center parking. Prior to the shopping center, parking and access roads being developed, there were three small, rural residences on the subject property in the late 1940s and 1950s and a drainage channel extended through a portion of the subject property.

The adjacent Wendy’s restaurant, Sound Credit Union, Denny’s, ARCO and a bank are each on separate parcels with different ownership and are not part of the subject property.

A MTCA Cleanup Site known as the Former Y Pay Mor Cleaners is part of the subject property; the dry cleaner was previously located at the eastern end of the shopping center building.

The subject property is shown relative to surrounding physical features on the Vicinity Map, Figure 1. The layout of the subject property and surrounding properties is shown on the Site Plan, Figure 2. Sound Transit’s proposed construction and development include the future station, a parking structure, a stormwater vault, elevated tracks and columns, parking, roads and sidewalks (Figure 3). Proposed construction and development activities by Sound Transit could change as project design is refined.

The results of this Phase II ESA will be used by Sound Transit as part of their evaluation of potential environmental liabilities associated with ownership of the property and future design and construction of the FWLE. This report has been prepared for the exclusive use of Sound Transit, their agents and project design team. Because this environmental report is not intended for use by others, no one else should rely on this report without first conferring with GeoEngineers.

Throughout the report, references to “the FWLE”, the “project”, the “proposed project”, “the alignment,” or the “light rail corridor” refer to the alignment selected by the Sound Transit Board in January 2017 after publication of the FEIS.

## 1.1 FWLE Project Description

Sound Transit intends to extend light rail between the cities of SeaTac and Federal Way, through the Federal Way Link Extension Preferred Alternative route. The Sound Transit 2 (ST2) Plan, approved by

voters in 2008, included environmental study and design of this extension. This 7.8-mile extension would extend light rail south from the Angle Lake Station terminus of the Central Link system at South 200<sup>th</sup> Street in SeaTac to the Federal Way Transit Center (FWTC) at South 317<sup>th</sup> Street. The FWLE would travel within the cities of SeaTac, Des Moines, Kent, and Federal Way in King County.

Link Light Rail is currently operating between University of Washington, Seattle and Sea-Tac International Airport. In 2008 the ST2 program was approved by voters. This package added nearly 36 new miles of service to the north, south, and east, to Sound Transit's (ST) initial light rail line, resulting in 55 miles of light rail open for revenue service by 2023. The ST2 program of projects includes construction of light rail from the Angle Lake Station, just south of SeaTac Airport, to Kent/Des Moines Station. ST2 funds were also programmed to provide environmental clearance and preliminary engineering design to downtown Federal Way.

In June 2016, the ST Board unanimously approved to move forward with a November 2016 ballot asking taxpayers to fund Sound Transit 3 (ST3) which was subsequently passed by the taxpayers. ST3 funds the remaining segments from Kent/Des Moines station to the FWTC. Revenue service to the FWTC Station is targeted to open by 2024.

## **1.2 Authorization**

This report was prepared under the terms of the subcontract between HDR and GeoEngineers, Inc. (GeoEngineers) dated August 24, 2012, along with Amendments 1 through 9. The subcontract authorizes GeoEngineers to provide environmental services for the Sound Transit Federal Way Link Extension in accordance with Agreement No. RTA/AE 044-12 between HDR and Sound Transit.

## **1.3 Site History and Summary of RECs**

An on-site former dry cleaner on subject parcel FL358 and an off-site adjacent service station (ARCO) were identified as recognized environmental conditions (RECs) for the subject property in the March 2017 Phase I ESA. Both are identified in Ecology databases as MTCA cleanup Sites as follows:

- Y Pay Mor Dry Cleaner, also known as Sea Tac Plaza, 2210 S. 320<sup>th</sup> Street, Cleanup Site ID 3180, Facility Site ID 2518. "No Further Action" status as of 1998 with an environmental covenant.
- ARCO 5241, also known as C&C Arco, 2202 S. 320<sup>th</sup> Street, Cleanup Site ID 6171, Facility Site ID 49513627. "Cleanup Started" status.

A detailed summary of environmental assessment, cleanup history and regulatory status associated with each of these Sites is presented below in Sections 1.3.1 and 1.3.2. The Phase II ESA for the subject property assessed soil and groundwater conditions in relation to documented past releases at both of these Sites.

Relative to the Tacoma Smelter Plume, we note that the subject property is mapped by Ecology as being in an area where Tacoma Smelter Plume impacts (e.g., arsenic and lead in surface soil) are

expected to be less than the MTCA Method A cleanup levels; soil sampling was conducted during the subject property Phase II ESA to confirm this information and additional sampling and evaluation of potential TSP impacts to soil will be completed in the future.

The Phase I ESA noted the presence of fill in the vicinity of the subject property, based on observations made during geotechnical explorations conducted along the FWLE corridor. Assessment of fill as a potential source of contaminants on the subject property is planned in the future.

### **1.3.1 Former Y Pay Mor Dry Cleaners**

The FL358 shopping center was built in 1979. Y Pay Mor Dry Cleaners was a tenant in the subject property shopping center between approximately the late 1980s and 1994, according to available historical city directories and information in Ecology files. Available information indicates the Y Pay Mor Dry Cleaner was located at the east end of the Sea-Tac Plaza shopping center building, approximately as indicated in Figure 2. The dry cleaner used the address 2210 Southwest 320<sup>th</sup> Street.

Ecology files for the Former Y Pay Mor Dry Cleaners were requested in October 2016 and in September 2017; a copy of Ecology's file is included in Appendix C. Based on our review of the documents provided, it is apparent that Ecology's file was missing complete copies of relevant site assessment and cleanup reports for the dry cleaner<sup>1</sup>; as of the publication of this Phase II ESA report, Ecology is searching their archival records for full copies of prior reports. In the meantime, the following is a summary of Y Pay Mor Dry Cleaners site assessment and remediation activities, based on our interpretation of the available documents provided by Ecology as of September 2017.

- A spill of tetrachloroethylene (PCE) occurred inside the dry cleaner business in 1991 and was initially responded to by the Fire Department, due to the report of hazardous vapors inside surrounding tenant spaces. The spill was reported to be PCE sludge that overflowed from a 5-gallon bucket onto the concrete floor beneath the dry-cleaning equipment located along the west wall of the tenant space. The quantity of PCE spilled was not determined; however, one Fire Department report indicates it was approximately 10 gallons and an Ecology report indicates it was 6 gallons. The liquid/sludge spilled onto the floor was cleaned up by a hazardous waste vendor (ChemPro) and the cleanup wastes (i.e., sorbants, etc) were profiled and disposed by Chempro. The Fire Department notified Ecology of the release.
- RCRA waste manifests dated between 1987 and 1992 for Y Pay Mor Cleaners (Generator), indicate that waste PCE was generated in each of these years and transported by Safety-Kleen for recycling.
- RZA-AGRA (known later as AGRA Earth and Environmental) conducted an initial site assessment

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<sup>1</sup> Ecology file correspondence indicates the following reports had been submitted to Ecology at one time (however, only excerpts of these reports were actually included in the public records requests made to Ecology in 2016 and 2017): "Preliminary Remedial Investigation," prepared by RZA AGRA, Inc. dated November 1992; "Remediation System Installation" prepared by RZA AGRA Inc. dated October 1993; Independent Remedial Action Report prepared by AGRA Earth and Environmental Inc. dated December 22, 1994.

of soil and groundwater conditions at the dry cleaner in approximately October 1992. RZA-AGRA figures indicate two floor drains and a former drain line in the dry cleaner space, nearest to the west wall of the space (Figure 4). Approximately 4 borings (identified as BW-1 through BW-4) were completed inside the dry cleaner space in June 1992. At least 3 additional borings were completed beneath the floor slab of the dry cleaner space and surrounding the building in October 1992. The number of October 1992 borings and their exploration names are not entirely clear from available records; however, two of the exterior borings were completed as monitoring wells, one located east of the building (B-5/MW-2, identified as Y Pay Mor-MW2 in this report) and one located south of the building in a downgradient location (B-11/MW-3, identified as Y Pay Mor-MW3 in this report). In addition, a groundwater sample was obtained in 1992 from B-12, which was apparently completed nearest to the 1991 spill location inside the building.

- The 1992 groundwater sample at B-12 had 1,700 µg/l PCE; the MTCA Method A cleanup level for PCE in groundwater is 5 µg/l. PCE and TCE were tentatively identified (concentration not quantified) in a groundwater sample from Y Pay Mor-MW3 in October 1992 and cis-1,2-dichloroethene (cis-1,2-DCE – a common degradation product of PCE) in this sample was 7 µg/l. PCE, TCE and cis-1,2-DCE were not detected in the October 1992 Y Pay Mor-MW2 groundwater sample. Y Pay Mor-MW3 was resampled in November 1992; PCE was not detected, TCE was 2.3 µg/l and cis-1,2-DCE was 6.6 µg/l.
- A soil vapor extraction system (SVE) was installed beneath the dry cleaner space in 1993. The SVE apparently utilized 7 vapor treatment wells to treat soil beneath the concrete floor slab of the dry cleaner space (Figure 4). The wells were connected via underground piping to an equipment enclosure located outside the building at the north end. The SVE system reportedly operated for approximately 1.5 years and was turned off in 1994. RZA-AGRA indicated that the system had removed approximately 4 pounds of PCE from the subsurface, based on vapor monitoring data.
- Y Pay Mor-MW2 and Y Pay Mor-MW3 were resampled in June and November 1994 and PCE and TCE were not detected. Only cis-1,2-DCE was detected in the Y Pay Mor-MW3 groundwater samples obtained in 1994. Reported depth to groundwater in these wells was generally about 8 feet bgs.
- Ecology's file contains a table of confirmation soil sample results completed inside the dry cleaner space in November 1994; seven borings (identified as CB-1 through CB-7 in Figure 4) were completed and one soil sample (from depths between 5 and 8 feet below ground surface [bgs]) from each boring was submitted for chemical analysis. PCE was not detected in six of the samples; the concentration of PCE in one sample from CB-4 (sample identification was B-4/A-1 at 5.0-6.5 feet) was 1.3 mg/kg, greater than the current MTCA Method A cleanup level of 0.05 mg/kg. This boring was located beneath the east end of the building, in the western

portion of the dry cleaner space. Cis-1,2-DCE was detected in four of the seven soil samples at concentrations less than the current MTCA Method B cleanup level of 160 mg/kg.

- In 1994, RZA-AGRA submitted an independent cleanup action report to Ecology requesting a No Further Action (NFA) determination. Ecology issued an interim NFA (Ecology 1995) conditional on the recording of a restrictive covenant and additional groundwater monitoring at Y Pay Mor-MW3. A restrictive Covenant dated September 1995 was filed under King County recording number 9510121424 and is signed by SeaTac Plaza Limited Partnership/Tri-Center Associates/Caseta Corporation. The 1995 covenant documents that residual concentrations of solvents remained in soil and groundwater at the Site at levels exceeding MTCA Method A cleanup levels. The 1995 covenant specifically notes PCE at a depth of 5 to 6.5 feet bgs at boring B-4 (CB-4), and cis-1,2-DCE at a depth of 6.5 to 8 feet bgs at boring B-5 (CB-5). Groundwater contamination was reported at B-12, beneath the former Y Pay Mor facility. The 1995 covenant documents the requirement for 3 years of semiannual groundwater sampling prohibits interfering with groundwater monitoring wells. The interim NFA letter is dated June 9, 1995 and is addressed to Ms. Melody Westerdal of The Norman Company (property management).
- The results of two 1997 groundwater sampling events at Y Pay Mor-MW3 were included in the Ecology file. PCE and TCE were not detected in the 1997 samples and cis-1,2-DCE was detected at concentrations of 1.82 and 3.63 µg/l, less than the corresponding MTCA Method B cleanup level of 80 µg/l in effect at that time (the current MTCA Method A cleanup level is 16 µg/l).
- Ecology issued a final NFA for Y Pay Mor Dry Cleaners in October 1998 (Ecology 1998), conditioned on a second Restrictive Covenant dated July 24, 1998 that was signed by SeaTac Plaza Corporation and recorded on August 10, 1998 under King County recording number 9808101434. The 1998 covenant applies to Parcel 242430-0050-00 (FL358). The 1998 covenant outlines the conditions required to preserve Ecology's NFA determination for the former dry cleaner Site, including prohibiting activities that interfere with the integrity of the remedial action and continued protection of human health and the environment, and prohibiting any activity that may result in the release or exposure of hazardous substances that remain on the property without prior written approval from Ecology. The October 1998 letter is addressed to Rich Gamiba, Citibank.
- Ecology's file does not contain any soil or groundwater sampling results for the Site after 1997.
- Two sets of correspondence in Ecology's file related to potential sale of the subject property:
  - Documents dated December 1998 indicate that Sea-Tac Plaza Corporation was the property owner at the time and the property was going to be sold to DGC II LLC.
  - Documents dated July 2014 indicate the property owner at the time was Byung Chan Park and the property was going to be sold to Troy Gessel.

The 2016 title report reviewed for the Phase I ESA (copy provided in Appendix C) includes the following recorded documents pertaining to hazardous substances:

- The 1995 Restrictive Covenant, King County recording number 9510121424.
- The 1998 Restrictive Covenant, King County recording number 9808101434.
- Exhibit A of the August 2014 Statutory Warranty Deed between Byung Chan Park and Young Su Park (Grantors) and Winson at Federal Way LLC includes reference to both the 1995 and the 1998 restrictive covenants described above.
- A Hazardous Substances Agreement between Winson at Federal Way LLC (Grantor) and East West Bank (Grantee) dated August 25, 2014. This agreement pertained to all three subject property parcels.

### **1.3.2 ARCO Gas Station**

The ARCO gas station was built in 1975. The ARCO parcel is almost entirely surrounded by the FL363 subject parcel. The FL363 shopping center access roads border the ARCO service station (ARCO facility 5241) to the west, north and east. South 320th Street borders the service station to the south (Figure 2).

Below is an abbreviated summary of pertinent assessment and interim cleanup actions completed at the ARCO Site based on our review of previous environmental reports on file at Ecology as of November 2016 and a recent communication in September 2017 Ecology's Site Manager. The discussion below pertains to the ARCO "Site," which represents areas contaminated from the ARCO UST release, both on and off the ARCO parcel. Previous exploration locations are presented in Figure 2; pertinent excerpts from previous reports are presented in Appendix C.

- A release of gasoline from the ARCO UST system was discovered in 1991 during replacement of the original (circa 1975) three service station USTs with four new double-walled fuel USTs. The approximate limits of the 1991 UST excavation (and current location of the four fuel USTs) are shown in Figure 2. Prior reports have not stated the volume of gasoline released from the leaking UST.
- A limited quantity of contaminated soil from surrounding the USTs, approximately 1,000 cubic yards, was excavated and was treated on the property before subsequently being transported to either a permitted landfill or to another ARCO property for disposal or additional treatment. Contaminated soil remaining at the limits of the 1991 UST excavation was not further excavated in 1991, reportedly because of the close proximity of the property boundary. At that time, six monitoring wells (MW-1 through MW-6) were installed in and around the ARCO USTs; one of these wells, MW-4, is situated on FL363 (Figure 2).
- Widespread impacts from the UST release were identified based on the results of the 1991 soil and groundwater sampling explorations. Contaminants identified in soil and groundwater samples at concentrations greater than applicable cleanup levels in place at the time included

benzene, gasoline-range hydrocarbons, and non-halogenated VOCs.

- Supplemental assessment was conducted on the ARCO property and surrounding properties and rights-of-way in the late 1990s and early 2000s to assess the extent of contaminated soil and groundwater associated with the ARCO Site. Supplemental assessment included: 36 direct-push explorations along a sewer alignment in South 320<sup>th</sup> Street, three borings near the Verizon Wireless store to the south across South 320<sup>th</sup> Street (STMW-1 through STMW-3), 14 groundwater monitoring wells (MW-7S/MW-7D through MW-13S/MW-13D) along South 320<sup>th</sup> Street, eight monitoring wells (MW-16 through MW-23) on the SeaTac Mall/Federal Way Commons property, and fifteen monitoring wells (MW-24 through MW-37 and MW-16R) on the ARCO and adjacent properties. Note that ARCO-MW32 and ARCO-MW37 are situated on the southern portion of FL358 (Figure 2) and ARCO-MW31 is east of the service station on FL363 (Figure 2).
- Concentrations of petroleum hydrocarbon constituents exceeded corresponding MTCA Method A cleanup levels in soil samples obtained within the UST excavation from 8 to 14 feet bgs, the UST piping excavation at 3 feet bgs, in borings completed on the ARCO property at 10 feet bgs, in a monitoring well south of South 320<sup>th</sup> Street at 5 feet bgs, and in soil probes situated west of the ARCO property (e.g., Denny's) from 8 to 11 feet bgs.
- Quarterly groundwater monitoring has generally been conducted in select monitoring wells since 1991. Quarterly groundwater monitoring identified liquid phase hydrocarbons (LPH) in select wells on the downgradient Denny's, Sound Credit Union and Verizon Wireless properties (Figure 2) at times in the past. Depth to groundwater has generally been less than 15 feet bgs. The groundwater gradient beneath the ARCO site was consistently reported to be toward the west-southwest. Shallow and deep water-bearing zones were identified in the area south of South 320<sup>th</sup> Street (see Section 3.1.2).
- Interim cleanup actions utilizing various in-situ technologies were conducted between 2001 and 2004 and in-situ remediation continued on the ARCO and Denny's properties from 2005 up to apparently 2012. Cleanup technologies that have been used at various times have included enhanced fluid recovery (EFR) in the deep aquifer zones, biosparging/bioventing in the shallow aquifer zone, free product recovery and dual-phase extraction (DPE). EFR, a technology designed to remove contaminated groundwater and free product (if present), was conducted between 2001 and 2005 using wells located north and south of South 320<sup>th</sup> Street. Dual phase extraction (DPE), a technology designed to remove soil vapors, contaminated groundwater, and free product (if present), was performed in 2002 using extraction wells on the SeaTac Mall property south of South 320<sup>th</sup> Street. DPE using extraction wells EX-3 through EX-6 reportedly occurred from 2003 to 2012. Bioventing/biosparging, a technology designed to remove soil vapors and free product (if present), was performed in 2004 using wells south of South 320<sup>th</sup> Street. Available previous reports have not presented quantities of groundwater, gasoline vapor, or free product recovered through interim cleanup actions at the Site. As of 2017, it does not appear that any in-situ cleanup technologies are currently operating.

- The mapped plume of gasoline-contaminated groundwater from the ARCO release as of 2015 is shown in Figure 2. Ecology files did not contain any groundwater sampling results after 2015. The interpreted plume boundaries have been modified somewhat based on the sampling results presented in this report as discussed in Sections 6.0 and 7.0.
- Regulatory correspondence in Ecology’s file includes a May 2012 “Further Action” letter from Ecology to ARCO’s consultant at the time (Antea). The letter indicates further remedial actions are necessary because characterization of the Site “is not sufficient to establish cleanup standards and select a remedial action” and because cleanup actions do not yet meet cleanup standards at the Site. No more recent Ecology correspondence was located after 2012.
- The Ecology file includes a 2014 Remedial Investigation (RI) Work Plan for the Site by Innovex (for ARCO/BP) developed to address remaining site characterization data gaps and identify an optimal remediation strategy for the Site (Innovex 2014). The RI has apparently not been completed.
- The ARCO Site was entered into Ecology’s Voluntary Cleanup Program (VCP) as of 2000 <https://fortress.wa.gov/ecy/gsp/Sitepage.aspx?csid=6171>. However, the Ecology site manager Heather Vick indicated the VCP agreement for the ARCO Site was terminated in February 2017 at BP’s request.

## 1.4 Purpose and Scope of Services

The purpose of the Phase II ESA is to assess current soil and groundwater conditions relative to Sound Transit’s proposed acquisition and construction on the subject property. The Phase II ESA was not intended to identify and evaluate all soil and groundwater characterization data gaps associated with the two known sources of contamination associated with the subject property. Furthermore, the Phase II ESA was not intended as a dry cleaner remedial investigation to meet the current standard of practice for a MTCA Remedial Investigation.

GeoEngineers’ scope of services consisted of the following:

1. Performed a site reconnaissance of the property.
2. Developed a health and safety plan for use by our field representatives in accordance with WAC 296-24.
3. Coordinated the marking of subsurface utilities at the exploration locations by notifying the one-call locate service for underground utilities in public rights-of-way and a private utility locate service for underground utilities on private property.
4. Retained a drilling subcontractor to advance six soil borings using direct-push drilling technology, and four borings completed using sonic technology. Borings FL358-B1, FL358-B3, FL358-MW-1, FL358-MW-2, FL358-MW-3 and FL358-MW-4 were located in the vicinity of the former Y Pay Mor Dry Cleaners. Borings FL363-B4, FL363-B5, FL363-B6 and FL363-B7 were completed in the vicinity of the ARCO service station.

5. Obtained soil samples from each of the explorations. Field screened the soil samples for evidence of petroleum and volatiles using visual, water sheen and headspace vapor screening methods. Visually classified the samples in general accordance with ASTM D 2488 and maintained a detailed log of each boring.
6. Obtained one-time grab groundwater samples from temporary wells installed in the four direct-push borings FL363-B4, FL363-B5, FL363-B6 and FL363-B7 in the vicinity of the ARCO service station.
7. Install monitoring wells in the four sonic-drilled borings located on FL358 (the former Y Pay Mor Dry Cleaner).
8. Measured depth to groundwater and obtained groundwater samples from four new monitoring wells in the vicinity of the former dry cleaner (FL358-MW1, FL358-MW2, FL358-MW3 and FL358-MW4), one existing dry cleaner-related well on FL358 (Y Pay Mor-MW3), two ARCO monitoring wells located in the southern portion of FL358 (ARCO-MW32 and ARCO-MW37), and one ARCO monitoring well located east of the ARCO parcel in FL363 (ARCO-MW31).
9. Submitted select soil and groundwater samples for chemical analysis of one or more of the following: gasoline-range petroleum hydrocarbons by NWTPH-Gx, diesel- and lube oil-range petroleum hydrocarbons by NWTPH-Dx, arsenic and/or lead by United States Environmental Protection Agency (EPA) Method 6000/7000 series, PAHs by EPA 8270D/SIM and/or VOCs by EPA Method 8260.
10. Evaluated the soil and groundwater sampling field and chemical analytical data relative to MTCA cleanup levels and naturally occurring background metals concentrations in Puget Sound region soil.

## 2.0 Site Description

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### 2.1 Location and Property Description

General location and property description information for the subject property are summarized in Table 2-1 below. The location is shown relative to surrounding physical features in Figure 1. The current layout of the subject property and surrounding properties are shown in Figure 2.

**Table 2-1. Subject Property Location and Description**

Quarter/Quarter, Section, Township and Range	SW/SW quarter of Section 9, Township 21, Range 4, Willamette Meridian
Addresses	Three addresses are associated with the shopping center: 2120, 2200 and 2210 South 320 <sup>th</sup> Street, Federal Way, King County, Washington
Tax Parcel Numbers	King County Parcels 2423200050 (FL358), 2423200010 (FL361), 2423200060 (FL363)
Approximate Areas	FL358 is 7.52 acres FL361 is 0.13 acres FL363 is 1.19 acres (Total 8.84 acres)
Existing Use(s)	The currently-occupied retail shopping center buildings are situated on FL358. FL361 comprises landscaped and paved parking areas for the shopping center. No structures are situated on FL363, which includes paved access roads and utility easements.

### 2.2 Site Vicinity and General Characteristics

The subject property is located in an area of predominantly commercial land uses, including retail stores, restaurants and commercial offices. Figure 2 shows the configuration of the subject property and surrounding properties. A survey of the subject property presented in Appendix C indicates the locations of storm drain and sanitary sewer easements that cross portions of the subject property and may contribute to preferential pathways for contaminant migration in groundwater or soil vapor.

### 2.3 Site Reconnaissance and Interview

GeoEngineers personnel visited the subject property on October 2, 2017 to evaluate current conditions relative to previously identified RECs, and to assess the property for potential RECs not identified previously. Neither the owners nor an available site representative were on site to conduct an interview regarding site history and use. GeoEngineers did not enter any of the site buildings, and all observations were made from the surrounding driveways and parking lots.

No newly identified potential on-site sources of contamination were noted during the Phase II ESA

visual reconnaissance of the subject property in October 2017. Previously installed groundwater monitoring well Y PAY MOR-MW3 was located (Figure 2), while previous monitoring well Y PAY MOR-MW2 was not located and is assumed have either been removed or paved over. Monitoring wells previously installed for assessment of the past ARCO release were observed on the subject property including ARCO-MW31, ACRO-MW32, ARCO-MW37 and MW-4 (Figure 2). It is unclear whether remediation wells previously installed for the ARCO cleanup remain on the subject property.

Several pad-mounted, utility-owned electrical transformers are situated on the property with no observed staining on the ground surface or other evidence of spills or leakage. No surface features indicative of possible USTs were identified on the subject property during the recent site reconnaissance.

## 3.0 Physical Setting

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### 3.1 Topography and Hydrogeologic Setting

The subject property is at an elevation of approximately 434 feet (North American Vertical Datum of 1988 [NAVD 88], sea level). Land surface at the site is generally flat. Our knowledge of the general physiographic setting, geology and groundwater occurrence in the vicinity of the subject property is based on our review of the available maps, our general experience in the area and our recent soil explorations. Subsurface conditions observed during our recent soil explorations are described in the following sections of this report.

#### 3.1.1 Geologic Setting

Glaciation events in the Puget Lowland left thick deposits of glacially-derived and reworked sediments across the region. The upland plateau in the Project area was formed during the latest glacial epoch called the Vashon stade of the continental Fraser glaciation. The advance and retreat of the Vashon-age Puget glacial lobe, approximately 14,000 to 10,000 years ago, deposited most of the near-surface materials and sculpted most of the present landforms within the Puget Lowland.

After the latest glaciation, Holocene period sediments were deposited over the glacial soils. These deposits typically consist of alluvial soils commonly found in river valleys as well as colluvial deposits (landslide materials) on slopes. Peat and other organic soils occur in numerous depressional areas at the surface. Some of these Holocene period sediments have been modified by human activity, including placement of undocumented landfill material in the Midway landfill and placement of roadway embankment fill for construction of I-5.

A 1949 topographic map shows a north to south extending drainage channel that appeared to extend onto the subject property; the approximate extent of the historic drainage channel is shown in Figure 2. The drainage channel was filled sometime in the past and current site grades are relatively flat. The base of the historic drainage channel is interpreted to represent an historic local topographic depression (subsequently filled). Geotechnical borings completed nearby in the vicinity of the drainage channel document the presence of fill with woody debris, and, in one boring, the presence of creosote odor. An area of the Sea-Tac Plaza parking area (FL358) also represented a local historic topographic low (subsequently filled) based on apparent standing water in that area shown in a 1974 aerial photograph. Portions of the filled drainage channel or other historic filled depressions may underlie portions of the subject parcels.

#### 3.1.2 Groundwater Conditions

Based on previous environmental investigations completed at the subject property in connection with the former Y Pay Mor Dry Cleaners and the ARCO, groundwater is encountered at depths ranging from approximately 6 to 13 feet bgs, with static water levels approximately 5 to 10 feet deeper for wells completed between 20 to 30 feet bgs. The Innovex report (Innovex 2014) comments that:

“A single water-bearing zone has been identified on the ARCO property. West and south of the property two water-bearing zones are evident...at the southern property boundaries of the ARCO and Denny’s Restaurant properties. Silt and clay encountered at the ARCO property transitions to inter-fingering layers of clay, silt, and silty sand, with increasing gravel content with depth. In the vicinity of MW-21, south of South 320<sup>th</sup> Street, a 5- to 13-foot-thick layer of silty gravel has been observed between 17 and 30 feet bgs in wells MW-19 to MW-22, corresponding with the deeper water-bearing zone.”

Based on our review of previous reports, there appears to be hydraulic connectivity between the shallow- and deep- water bearing zones. The direction of shallow groundwater flow direction was reported to the west-southwest in prior reports related to the ARCO investigation.

Groundwater encountered in the FWLE project area may be grouped into one of three main aquifer types: unconfined, semi-confined and confined artesian. Unconfined aquifers may include groundwater within recent alluvium along streams and creeks, within recessional outwash that is perched above low-permeability glacial till, within discontinuous lenses of permeable layers in glacial till, or within advance outwash that is exposed at the ground surface. The semi-confined aquifer is present in the advance outwash where it is overlain by less permeable soils, but the groundwater level is below the confining layer, making the aquifer semi-confined. Confined aquifers encountered in the project area are either flowing artesian (elevated groundwater levels aboveground surface) or sub-artesian (elevated groundwater levels at or near ground surface). Groundwater in the vicinity is noted as being in a semi-confined aquifer type (GeoEngineers, January 2017).

Groundwater was measured at approximately 7.2 to 12.4 feet bgs based on groundwater monitoring data obtained from the subject property during the Phase II ESA.

## 4.0 Contaminants of Concern and Cleanup Levels

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Potential contaminants in soil and groundwater are chlorinated VOCs associated with the historic upgradient dry cleaner release (Y Pay Mor Dry Cleaners) and petroleum hydrocarbon constituents associated with the ARCO gasoline release; specifically, gasoline-, diesel- and lube oil-range petroleum hydrocarbons, VOCs, PAHs and lead. Potential contaminants associated with the Tacoma Smelter Plume are lead and arsenic. Potential contaminants commonly associated with fill of unknown origin include petroleum-related constituents, PAHs and metals.

The chemical analytical data for samples obtained during this investigation were compared to the respective Model Toxics Control Act (MTCA) Method A cleanup levels. MTCA Method B cleanup levels were used for analytes where MTCA Method A cleanup levels are not established. Where appropriate, detected concentrations of metals in soil also were compared to naturally occurring background metals concentrations in Puget Sound region soil (Washington State Department of Ecology [Ecology], 1994).

For purposes of Sound Transit's property acquisition and future construction activities at FL358, FL361 and FL363, contaminated soil/groundwater and impacted soil/groundwater are defined as follows:

1. **Contaminated Soil/Groundwater:** Soil/groundwater containing concentrations of contaminants greater than applicable cleanup levels such as MTCA Method A Cleanup Levels for Unrestricted Use, or other relevant cleanup levels established by state, local, or federal regulation, law, or permit condition, if no Method A level has been developed.
2. **Impacted Soil/Groundwater:** Soil/groundwater containing detectable concentrations of contaminants that are less than applicable cleanup levels, specifically MTCA Method A Cleanup Levels for Unrestricted Land Use, or other relevant cleanup levels established by state, local, or federal regulation, law, or permit condition, if no Method A level has been developed. Also, soil containing detectable concentrations of total metals that are less than MTCA Cleanup Levels but greater than naturally occurring background metals concentrations in Puget Sound region soil (Ecology, 1994). Impacted soil/groundwater is not considered contaminated, but may be subject to regulatory requirements under the Dangerous Waste regulations, and restrictions or conditions for end use at off-site facilities and recovered groundwater may be subject to permit for sewer discharge limits and/or may require pretreatment.

It is important to note that releases of spent solvent from dry cleaning operations (such as PCE and its breakdown products including TCE and cis-1,2-DCE) are typically classified as F002-listed Dangerous Waste under the state Dangerous Waste regulations, Chapter 173-303 WAC. Soil or groundwater with detectable PCE or breakdown products, if excavated or removed through dewatering, would also be classified as F002-listed waste and subject to special requirements for handling, labeling, tracking and disposal/discharge.

## 5.0 Subsurface Explorations

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### 5.1 General

The Phase II ESA explorations were completed as a pre-acquisition screening level assessment to characterize current soil and groundwater conditions relative to Sound Transit's planned acquisition and construction on the subject property. Contamination exists on the subject property related to a past release(s) of PCE at the former on-site Y Pay Mor Dry Cleaners and a release(s) of gasoline from USTs at the southern-adjacent off-site ARCO service station. The scope of the subject property Phase II ESA was developed to assess current conditions in accessible exterior areas of the property and broadly delineate, if possible, the extent of soil and groundwater contamination. The Phase II ESA was not intended to identify and evaluate all soil and groundwater characterization data gaps associated with the two known sources of contamination. Furthermore, the Phase II ESA was not intended as a dry cleaner remedial investigation to meet the current standard of practice for a MTCA Remedial Investigation.

The Phase II ESA explorations included four sonic-drilled borings and two direct-push borings in the vicinity of the former Y Pay Mor dry cleaner and three direct-push borings in the vicinity of the ARCO station from which soil and groundwater samples were obtained to characterize subsurface conditions. Holt Services (Holt) performed drilling services. The borings were completed to depths of 20 to 25 feet bgs. The field explorations were completed between October 2 through 5, 2017.

The subsurface explorations were monitored by a representative of GeoEngineers who visually classified and performed field screening tests on soil samples collected from the subsurface explorations for evidence of petroleum and volatiles. Subsurface conditions and field screening results are shown on the subsurface exploration logs presented in Appendix A. Ground surface elevations for the boring locations were determined by locational survey.

Sonic-drilled borings FL358-MW1 through FL358-MW4 were completed as permanent monitoring wells. Groundwater samples were collected from temporary wells installed in the open boreholes at four direct-push borings (FL363-B4 through FL363-B7) and from existing Y Pay Mor and ARCO monitoring wells Y Pay Mor-MW3, ARCO-MW31, ARCO-MW32 and ARCO-MW37. The groundwater samples were collected using low-flow sampling procedures with a peristaltic pump, and groundwater parameters were monitored until stable readings were obtained, as explained further in Appendix A. Following stabilization of the groundwater parameters, samples were collected directly into the laboratory-supplied containers. Groundwater monitoring and sampling was conducted on October 3, 6 and 9, 2017.

Soil and groundwater samples were submitted to OnSite Environmental Laboratories (OnSite) in Redmond, Washington for chemical analysis. The chemical analytical results are summarized in Tables 1 through 4. Copies of the laboratory reports are presented in Appendix B.

## 5.2 Sampling and Analysis Plan

The sampling and analysis plan for the Phase II ESA based on a review of the prior environmental reports as explained in Section 1.3 and other information regarding anticipated subsurface conditions at the subject property. Analyses completed for each of the Phase II ESA explorations and monitoring wells sampled are summarized in the table below.

**Table 5.1 Sampling and Analysis Summary**

Sample Location ID	Diesel- and Lube-Oil Range PHCs	Gasoline-Range PHCs	PAHs	VOCs	As and/or Pb
Y Pay Mor Explorations					
FL358-B1	--	--	--	S	--
FL358-B3	--	--	--	S	--
FL358-MW1	S	S	--	GW/S	S
FL358-MW2	--	--	--	GW/S	S
FL358-MW3	--	--	--	GW/S	S
FL358-MW4	--	--	--	GW/S	S
Y Pay Mor-MW3	--	--	--	GW	--
ARCO Explorations					
FL363-B4	GW/S	GW/S	GW/S	GW/S	GW/S
FL363-B5	GW/S	GW/S	GW/S	GW/S	GW/S
FL363-B6	GW/S	GW/S	GW/S	GW/S	GW/S
FL363-B7	GW/S	GW/S	GW/S	GW/S	GW/S
ARCO-MW31	GW	GW	GW	GW	GW
ARCO-MW32	GW	GW	GW	GW	GW
ARCO-MW37	GW	GW	GW	GW	GW

**Notes:**

PHCs = petroleum hydrocarbons; VOCs = volatile organic compounds; PAHs = polycyclic aromatic hydrocarbons;

As = Arsenic; Pb = Lead;

“GW” = groundwater sample analyzed

“S” = soil sample analyzed

“—” = not analyzed

## 6.0 Findings

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### 6.1 Subsurface Observations and Field Screening

We observed the completion of six borings using sonic- and direct-push drilling methods in the vicinity of the former Y Pay Mor dry cleaner (FL358-B1, FL358-B3, and FL358-MW1 through FL358-MW4). We observed the completed of four direct-push borings in the vicinity of the ARCO (FL363-B4 through FL363-B7) at the subject property. Discrete soil samples were collected from each boring for field screening and possible chemical analysis.

Soil conditions encountered consisted of interbedded sands and silts with occasional gravel to the total depths explored. No significant evidence of fill was noted in the soil boring samples with the exception of occasional organic matter observed at depths of 2 to 7 feet bgs in some of the boings.

Physical evidence of petroleum or volatiles (slight sheen and low PID readings) was observed during field screening of soil samples collected from borings near the former Y Pay Mor (FL358-B3 and FL358-MW1).

Physical evidence of petroleum or volatiles (elevated PID readings) was observed during field screening of soil samples collected from borings near the ARCO station (FL363-B4 and FL363-B5). Field screening results are shown in the boring logs in Appendix A.

Groundwater was sampled from temporary wells installed in the open boreholes at direct-push borings FL358-B1, FL358-B3, FL363-B4 through FL363-B7, and from the four installed and four existing permanent monitoring wells FL358-MW1 through FL358-MW4, Y Pay Mor-MW3, and ARCO-MW31, ARCO-MW32 and ARCO-MW37. The depth to groundwater measured in October 2017 in wells near the former Y Pay Mor dry cleaners ranged from 7.2 to 7.5 feet bgs. The depth to groundwater measured in October 2017 in wells near the ARCO ranged from 9.7 to 12.4 feet bgs.

### 6.2 Analytical Testing Results

#### 6.2.1 Y Pay Mor Soil

Twenty-nine soil samples collected from six borings were submitted for chemical analysis of one more of the following: gasoline-range petroleum hydrocarbons, diesel- and lube oil-range petroleum hydrocarbons, VOCs, arsenic and lead. The Y Pay Mor Soil Chemical Analytical Results are presented in Table 1.

##### 6.2.1.1 Petroleum Hydrocarbons

Two soil samples from one of six explorations completed near the former Y Pay Mor were analyzed for petroleum hydrocarbons. Gasoline- and diesel-range petroleum hydrocarbons

were not detected in soil samples from FL358-MW1 at depths of 1.5 to 2.5 feet bgs and 5 to 6 feet bgs. Low levels of lube oil-range petroleum hydrocarbons were detected in soil samples FL358-MW1-1.5-2.5 and FL358-MW1-5-6 (100 mg/kg and 79 mg/kg, respectively), at concentrations significantly less than the MTCA Method A cleanup level of 2,000 mg/kg.

#### **6.2.1.2 VOCs**

Nineteen soil samples from six explorations completed in close proximity of the former dry cleaner were analyzed for the dry-cleaning solvent PCE and breakdown products TCE, cis-1,2-DCE and vinyl chloride (Table 1). Depths sampled ranged from 0.5 to 19 feet bgs. PCE, TCE and cis-1,2-DCE were all detected in three samples from two of the borings: FL358-B1-10-11, FL358-B1-13-14 and FL358-MW1-19-20. Cis-1,2-DCE only was additionally detected in a fourth sample, also from FL358-B1: FL358-B1-5-6. The PCE concentration in sample FL358-B1-13-14 (0.066 mg/kg) was greater than the MTCA Method A cleanup level of 0.05 mg/kg.

Concentrations of PCE in the remaining samples and the TCE and cis-1,2-DCE concentrations were all less than the corresponding MTCA Method A cleanup levels. Vinyl chloride was not detected in the soil samples tested.

Relatively low concentrations of the following VOCs were detected in one or more of the Y Pay Mor October 2017 soil samples (Table 1): 2-butanone (MEK), acetone, carbon disulfide, and p-isopropyltoluene. The detected concentrations of these VOCs were significantly less than MTCA cleanup levels, where established. These compounds are suspected to be related to laboratory procedures or laboratory or field sampling variability. Benzene (FL358-B1-5-6, 0.0010 mg/kg), ethylbenzene (FL358-B3-12-13, 0.0014 mg/kg and FL358-MW4-6.5-7.5, 0.0022 mg/kg) and toluene (FL358-B3-12-13, 0.032 mg/kg) were detected but at very low concentrations that are just slightly above laboratory detection limits.

#### **6.2.1.3 Metals**

Eleven samples obtained from 6-inch depth intervals within the upper 1-foot bgs from locations in the vicinity of the former Y Pay Mor facility were analyzed for arsenic and lead. Arsenic (46 mg/kg) was detected in sample FL358-B3-0.5-1, the MTCA Method A cleanup level for arsenic is 20 mg/kg. Only one other sample had arsenic detected: FL358-MW3-0-0.5 (6.2 mg/kg), less than the MTCA Method A cleanup level.

Lead was detected in sample FL358-B3-0.5-1 (11 mg/kg). Lead was not detected in the remaining samples analyzed.

### **6.2.2 Y Pay Mor Groundwater**

Six groundwater samples collected from two borings and four monitoring wells were submitted for chemical analysis of VOCs. The Y Pay Mor Groundwater Chemical Analytical Results are presented in Table 2. Halogenated VOCs associated with dry cleaning solvents were detected in groundwater samples collected from monitoring wells FL358-MW1, FL358-MW4, and Y Pay

Mor-MW3. Cis-1,2-DCE was detected in all three wells FL358-MW1, FL358-MW4, and Y Pay Mor-MW3 (0.61 µg/l, 0.34 µg/l and 0.20 µg/l, respectively). PCE and TCE were detected in the groundwater sample from FL358-MW1 at concentrations of 0.21 µg/l and 1.0 µg/l, respectively. The detected concentrations of halogenated VOCs in groundwater at these three locations were less than their MTCA Method A cleanup levels.

### **6.2.3 ARCO Soil**

Nineteen soil samples collected from four borings were submitted for chemical analysis of one more of the following: gasoline-range petroleum hydrocarbons, diesel- and lube oil-range petroleum hydrocarbons, VOCs, PAHs, arsenic and lead. The ARCO Soil Chemical Analytical Results are presented in Table 3.

#### **6.2.3.1 Petroleum Hydrocarbons**

Thirteen soil samples were analyzed for petroleum hydrocarbons. Gasoline-range petroleum hydrocarbons were detected in soil samples FL363-B4-11-12 (73 mg/kg), FL363-B4-11-12 (1,300 mg/kg), FL363-B4-17-18 (8.8 mg/kg), and FL363-B5-11.5-12.5 (500 mg/kg). The concentration of gasoline-range petroleum in samples FL363-B4-11-12 and FL363-B5-11.5-12.5 exceed the MTCA Method A cleanup level of 30 mg/kg. The vertical extent of gasoline impacts at location FL363-B5 is represented by the next deeper sample (FL363-B5-17-18) where gasoline-range petroleum hydrocarbons were not detected; vertical limits for the impact of gasoline at FL363-B4 were not established. Gasoline-range petroleum hydrocarbons were not detected in the remaining samples analyzed.

Diesel-range petroleum hydrocarbons were detected in soil sample FL363-B4-7-8 at a concentration of 74 mg/kg, less than the MTCA Method A cleanup level of 2,000 mg/kg for unrestricted land use. The vertical extent of diesel impacts at location FL363-B4 is represented by the next deeper sample (FL363-B4-11-12) where diesel-range petroleum hydrocarbons were not detected. Diesel-range petroleum hydrocarbons were not detected in the remaining samples analyzed.

Lube oil-range petroleum hydrocarbons were detected in FL363-B4-7-8 and FL363-B4-17-18 (500 mg/kg and 98 mg/kg, respectively), and FL363-B6-6-7 and FL363-B6-11-12 (63 mg/kg and 100 mg/kg, respectively). These concentrations are below the MTCA Method A cleanup level of 2,000 mg/kg for unrestricted land use. The vertical extent of lube oil petroleum impacts is represented at FL363-B6 at depth by a sample collected from a deeper soil interval (FL363-B6-17-18) where lube oil-range petroleum hydrocarbons were not detected; vertical limits were not established at location FL358-B4. Lube oil-range petroleum hydrocarbons were not detected in the remaining samples analyzed.

### 6.2.3.2 VOCs

Petroleum hydrocarbon-related VOCs were detected in ten of 13 soil samples analyzed from the four boring locations completed near ARCO. Benzene was detected in six soil samples from four locations: FL363-B4-7-8 (0.0035 mg/kg); FL363-B5-17-18 (0.012 mg/kg); FL363-B6-6-7 and FL363-B6-11-12 (0.020 mg/kg and 0.0025 mg/kg, respectively); and FL363-B7-10-11 (0.00089 mg/kg). All benzene concentrations were less than the MTCA Method A cleanup level of 0.03 mg/kg and were limited vertically by deeper samples that were non-detect for benzene. Total xylenes were detected in sample FL363-B4-12-13 (22.8 mg/kg) at a concentration greater than the MTCA Method A cleanup level of 9 mg/kg.

Additional VOCs detected include 1,2,4-trimethylbenzene, 1,3,5-trimethylbenzene, 2-butanone (MEK) and acetone (both common laboratory contaminants), carbon disulfide, ethylbenzene, isopropylbenzene, naphthalenes, n-butylbenzene, n-propylbenzene, p-isopropyltoluene, sec-butylbenzene, and toluene all at concentrations less than established MTCA cleanup levels.

### 6.2.3.3 PAHs

Noncarcinogenic PAHs (including naphthalenes) were detected in soil samples analyzed from borings FL363-B4 (FL363-B4-7-8, FL363-B4-11-12, FL363-B4-12-13 and FL363-B4-17-18), FL363-B5 (FL363-B5-5.5-6.5 and FL363-B4-11.5-12.5), and FL363-B6 (FL363-B6-11-12). The detected concentrations were all less than the corresponding MTCA cleanup levels. PAHs were not detected in the remaining samples analyzed.

### 6.2.3.4 Metals

A total of six samples obtained from 6-inch depth intervals within the upper 1-foot bgs from locations across the subject property were analyzed for arsenic and lead; lead was analyzed in 13 deeper soil samples from borings completed closest to the ARCO (FL363-B4 through FL363-B7).

Arsenic and lead were not detected in samples collected from the upper 1-foot bgs of soil. Lead was detected in two of 13 samples at concentrations less than the MTCA cleanup level of 250 mg/kg: FL363-B4-7-8 (31 mg/kg); and FL363-B6-11-12 (23 mg/kg). Lead was not detected in the remaining samples analyzed.

## 6.2.4 ARCO Groundwater

Seven groundwater samples collected from the borings and monitoring wells were submitted for chemical analysis of one more of the following: gasoline-range petroleum hydrocarbons, diesel- and lube oil-range petroleum hydrocarbons, VOCs, PAHs and lead. The ARCO Groundwater Chemical Analytical Results are presented in Table 4.

#### **6.2.4.1 Petroleum Hydrocarbons**

Gasoline-range petroleum hydrocarbons were detected in groundwater samples collected from borings FL363-B4 (24,000 µg/l) and FL363-B5 (7,200 µg/l). The concentrations of gasoline-range petroleum in these samples exceed the MTCA Method A cleanup level of 800 µg/l (see Section 6.2.2.2 below). Gasoline-range petroleum hydrocarbons were not detected in the remaining samples analyzed.

Diesel-range petroleum hydrocarbons, identified as gasoline extending into the range quantified as diesel, were detected in groundwater samples collected from borings FL363-B4 (2.3 mg/l) and FL363-B5 (1.1 mg/l) at concentrations exceeding the MTCA Method A cleanup level of 0.5 mg/l. Diesel-range petroleum hydrocarbons were detected in groundwater samples collected from monitoring wells ARCO-MW32 and ARCO-MW37 at concentrations below the MTCA Method A cleanup level. Diesel-range petroleum hydrocarbons were not detected in the remaining samples analyzed.

Lube oil-range petroleum hydrocarbons were detected in groundwater sample collected from borings FL363-B4 (0.52 mg/l) at a concentration exceeding the MTCA Method A cleanup level of 0.5 mg/l. Lube oil-range petroleum hydrocarbons were detected in groundwater samples collected from boring FL363-B6 and monitoring well ARCO-MW37 at concentrations below the MTCA Method A cleanup level and only slightly above the laboratory detection limit. Lube oil-range petroleum hydrocarbons were not detected in the remaining samples analyzed.

#### **6.2.4.2 VOCs**

VOCs associated with petroleum hydrocarbons were detected in groundwater samples collected from FL363-B4, FL363-B5 and FL363-B6. Benzene was detected in the sample analyzed from FL363-B5 at a concentration of 510 µg/l, exceeding the MTCA Method A cleanup level of 5 µg/l. Other VOCs exceeding MTCA cleanup levels were detected in samples from FL363-B4, including 1,3,5-trimethylbenzene (230 µg/l), naphthalenes (160 µg/l) and total xylenes (2,800 µg/l).

The VOC 1,3-dichlorobenzene was detected in one groundwater sample: FL363-B6 (0.31 µg/l). There is no published MTCA cleanup level for this compound in groundwater. The source of this VOC is unclear and would require additional sampling and analysis to evaluate further.

#### **6.2.4.3 PAHs**

PAHs were detected in groundwater samples collected from borings FL363-B4 and FL363-B5, including total naphthalenes in the sample from FL363 (233 µg/l) at a concentration exceeding the MTCA Method A cleanup level of 160 µg/l. PAHs were not detected in the remaining groundwater samples analyzed.

#### **6.2.4.4 Metals**

Lead was detected in groundwater samples collected from borings FL363-B4, FL363-B5, FL363-B6 and FL363-B7, and monitoring well ARCO-MW1. Concentrations of lead exceeded the MTCA Method A cleanup level of 15 µg/l in the samples analyzed from FL363-B4 (29 µg/l), FL363-B5 (29 µg/l), FL363-B6 (50 µg/l) and FL363-B7 (180 µg/l). Lead was not detected in the remaining groundwater samples analyzed from monitoring wells ARCO-MW32 and ARCO-MW37.

## **7.0 Conclusions and Recommendations**

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The purpose of the Phase II ESA was to evaluate the potential for RECs or other potential sources of contamination to affect the subject property, and/or to impact soil that may be encountered during Sound Transit construction activities at the site.

### **7.1 Phase II ESA Conclusions and Recommendations**

The Phase II ESA was conducted to assess current soil and groundwater conditions relative to Sound Transit's proposed acquisition and construction on the subject property. Contamination associated with the Recognized Environmental Conditions (RECs) for the property as identified in the Phase I ESA prepared by GeoEngineers, Inc. dated March 2017 was evaluated during this study.

A survey of the subject property presented in Appendix C indicates the locations of storm drain and sanitary sewer easements that cross portions of the subject property and may contribute to preferential pathways for contaminant migration in groundwater or soil vapor.

#### **7.1.1 Potential On-site Sources - Former Y Pay Mor Dry Cleaners**

Y Pay Mor Dry Cleaners was a tenant in the subject property shopping center on FL358 between approximately the late 1980s and 1994. The dry cleaner was located at the east end of the Sea-Tac Plaza shopping center building, approximately as indicated in Figure 2.

Based on our review of available documents provided by Ecology (Appendix C), a spill of PCE occurred inside the dry cleaner space in 1991. Site assessment completed in 1992 included limited sampling of soil and groundwater beneath and surrounding the dry cleaner space. PCE (1,700 µg/l) was detected in a groundwater sample obtained from beneath the dry cleaner space (B-12, Figure 4). A soil vapor extraction (SVE) remediation system operated beneath the dry cleaner space in 1993 and 1994. Post-remediation compliance sampling included 1994 soil sampling from borings inside the dry cleaner and 1994 and 1997 groundwater sampling at downgradient monitoring well Y Pay Mor-MW3 (Figures 2 and 4). The concentration of PCE in one of the 1994 soil samples from inside the dry cleaner space (CB-4, Figure 4) was 1.3 mg/kg, greater than the MTCA Method A cleanup level of 0.05 mg/kg. Concentrations of PCE and its degradation compounds trichloroethylene (TCE), cis-1,2-dichloroethene (cis-1,2-DCE) and vinyl chloride in groundwater samples from 1994 and 1997 were less than MTCA cleanup levels (Figure 4).

In 1995 Ecology issued an interim NFA (Ecology, June 9, 1995) conditional on the recording of a restrictive covenant (Appendix C). The 1995 covenant documents that residual concentrations of solvents remained in soil and groundwater at the site at levels exceeding MTCA Method A cleanup levels. Ecology issued a final NFA (October 23, 1998) for Y Pay Mor Dry Cleaners,

conditioned on a second Restrictive Covenant recorded in August 1998 (Appendix C). The 1998 covenant outlines the conditions required to preserve Ecology's NFA determination for the former dry cleaner Site. Ecology's file does not contain any soil or groundwater sampling results for the Y Pay Mor Site after 1997.

#### **7.1.1.1 Field Explorations, Sampling and Chemical Analytical Testing**

The vicinity of the former Y Pay Mor Dry Cleaner was assessed for this study by completing six exploration borings (FL358-B1, FL358-B3, FL358-MW-1, FL358-MW-2, FL358-MW-3 and FL358-MW-4), four of which were completed as monitoring wells. Soil samples were obtained from all six explorations and selected samples were submitted for chemical analysis. Groundwater samples were obtained from the four newly installed monitoring wells FL358-MW-1, FL358-MW-2, FL358-MW-3 and FL358-MW-4 and from one previously installed monitoring well, Y Pay Mor-MW3. Monitoring wells FL358-MW-3, FL358-MW-4 and Y Pay Mor-MW3 are in nearby downgradient locations, to the south and southwest, relative to the former dry cleaner space. Volatile organic compounds (VOCs) were also analyzed in downgradient groundwater samples obtained from the south/southwest margins of the subject property (grab water samples from FL363-B4, FL363-B5, FL363-B6 and FL363-B7 and monitoring well samples from ARCO-MW31 on FL363, and ARCO-MW32 and ARCO-MW37 on FL358) to confirm the presence/absence of dry cleaner-related solvents in groundwater at these downgradient locations on the subject property. No explorations were completed inside the shopping center building.

Below is a summary of key findings relative to the Phase II ESA objectives for the Y Pay Mor Dry Cleaner Site. Phase II ESA analytical results are summarized in Tables 1 and 2 and illustrated in Figures 5 and 6.

#### **7.1.1.2 Soil**

Nineteen soil samples from six explorations completed in close proximity to the former dry cleaner were analyzed for the dry-cleaning solvent PCE and breakdown products TCE, cis-1,2-DCE and vinyl chloride (Table 1). Depths sampled ranged from 0.5 to 19 feet bgs. PCE, TCE and cis-1,2-DCE were all detected in three samples from two of the borings: FL358-B1-10-11, FL358-B1-13-14 and FL358-MW1-19-20. Cis-1,2-DCE only was additionally detected in a fourth sample, also from FL358-B1: FL358-B1-5-6. The PCE concentration in sample FL358-B1-13-14 (0.066 mg/kg) was greater than the MTCA Method A cleanup level of 0.05 mg/kg. Concentrations of PCE in the remaining samples and the TCE and cis-1,2-DCE concentrations were all less than the corresponding MTCA Method A cleanup levels. Vinyl chloride was not detected in the soil samples tested.

Based on the 1994 soil confirmation testing beneath the dry cleaner space, and the Phase II ESA boring soil sample results, PCE remains in soil in at least two locations – beneath the building footprint (CB-4) and outside the building north of the dry cleaner space (FL358-B1 at 13 to 14

feet bgs) - at concentrations greater than the MTCA Method A cleanup level. Figure 5 generally illustrates the distribution of dry cleaner solvents in soil at concentrations greater than MTCA cleanup levels. The full lateral and vertical extent of residual PCE in soil has not been assessed.

Detections of PCE, TCE and cis-1,2-DCE in soil appear to be related to a past release(s) associated with the former on-site dry cleaner. Spent dry cleaning solvent such as PCE would be considered an F002-listed Dangerous Waste under the State Dangerous Waste Regulations Chapter 173-303 WAC. Soil from the Site with detections of PCE, or its degradation products TCE and/or cis-1,2-DCE, that may be excavated in the future would likely also classify as F002-listed Dangerous Waste necessitating special handling, transport, tracking and disposal. Soil from the saturated zone within the area where groundwater has detectable concentrations of dry cleaning solvents (see below), would likely also be classified as dangerous waste.

Relatively low concentrations of the following VOCs were detected in one or more of the October 2017 soil samples (Table 1): 2-butanone (MEK), acetone, carbon disulfide, and p-isopropyltoluene. The detected concentrations of these VOCs were significantly less than MTCA cleanup levels, where established, and therefore were not considered further with regard to the Phase II ESA conclusions. These compounds are suspected to be related to laboratory procedures or laboratory or field sampling variability. Lube oil-range petroleum hydrocarbons (FL358-MW1-1.5-2.5, 100 mg/kg and FL358-MW1-5-6, 79 mg/kg), benzene (FL358-B1-5-6, 0.0010 mg/kg) and ethylbenzene (FL358-B3-12-13, 0.0014 mg/kg) were also detected but at very low concentrations that are just slightly above laboratory detection limits and significantly less than MTCA cleanup levels and therefore were not considered further with regard to the Phase II ESA conclusions for the vicinity of the former dry cleaner.

### **7.1.1.3 Groundwater**

The depth to groundwater measured in the existing new monitoring wells in October 2017 ranged from 7.2 to 7.5 feet bgs.

Five monitoring wells in close proximity to the former dry cleaner (FL358-MW1, FL358-MW2, FL358-MW3 [sampled in duplicate], FL358-MW4 and Y Pay Mor-MW3) were analyzed for the dry-cleaning solvent PCE and breakdown products TCE, cis-1,2-DCE and vinyl chloride (Table 2). PCE, TCE and cis-1,2-DCE were detected in the October 2017 sample from FL358-MW1; the detected concentrations were less than the corresponding MTCA Method A/B cleanup levels. Cis-1,2-DCE only was detected in two additional monitoring well samples, FL358-MW4 and Y Pay Mor-MW3; the detected concentrations were less than the MTCA Method B cleanup level. The October 2017 result for cis-1,2-DCE at Y Pay Mor-MW3 (0.20 µg/l), was approximately an order of magnitude lower than the cis-1,2-DCE concentrations reported for Y Pay Mor-MW3 based on 1997 sampling of this well (see Figure 4). Although dry cleaning solvents were not detected in the Phase II ESA groundwater samples at concentrations greater than MTCA cleanup levels, groundwater directly beneath the former dry cleaner space was not assessed

during the study and was previously documented to exceed the MTCA Method A cleanup level for PCE, generally as shown in Figure 6. The prior remediation system (SVE) is believed to have only been used to treat areas of soil beneath the building footprint.

Groundwater from the Site with detections of PCE or its breakdown products TCE and/or cis-1,2-DCE that may be recovered in the future through dewatering would likely classify as F002-listed Dangerous Waste necessitating special handling, transport, tracking and disposal/discharge.

PCE, TCE and cis-1,2-DCE were not detected in the downgradient groundwater samples obtained in October 2017 from the south margin of FL358 and on FL363 (grab water samples from FL363-B4, FL363-B5, FL363-B6 and FL363-B7 and monitoring well samples from ARCO-MW31 and ARCO-MW32 and ARCO-MW37), as illustrated in Figure 6.

### **7.1.2 Potential Off-site Sources - ARCO**

The ARCO parcel (identified as FL365) is surrounded to the north, west and east by subject parcel FL363. A release of gasoline from the ARCO UST system was discovered in 1991. Widespread gasoline impacts from the ARCO release were identified in soil and groundwater on the ARCO parcel and adjacent and surrounding parcels including downgradient locations to the south and southwest. The extent of the ARCO-related gasoline plume limits in groundwater as of 2015, based on reports available in Ecology's file, is illustrated in Figure 2 and was interpreted at that time to extend west and north of the ARCO parcel onto FL363. In-situ cleanup methods, primarily fluids or vapor extraction technologies, were used at various times in the past through 2012. Documents in Ecology's file for the ARCO Site include a May 2012 "Further Action" letter and a 2014 Remedial Investigation (RI) Work Plan. The ARCO Site was entered into Ecology's Voluntary Cleanup Program (VCP) as of 2000; however, the ARCO Site was terminated from the VCP in February 2017.

#### **7.1.2.1 Field Explorations, Sampling and Chemical Analytical Testing**

Soil and groundwater on the subject property in the vicinity of the ARCO located on the adjacent property were assessed for the Phase II ESA study by obtaining soil and grab water samples from four new exploration borings (FL363-B4, FL363-B5, FL363-B6 and FL363-B7) and sampling groundwater from three previously installed monitoring wells: ARCO-MW31 on FL363, and ARCO-MW32 and ARCO-MW37 on FL358. The primary purpose of the sampling was to evaluate the current extent of petroleum-related impacts in soil and groundwater resulting from the gasoline release at the ARCO service station. Phase II ESA explorations FL363-B4, FL363-B5, FL363-B6 and FL363-B7 were situated to evaluate the extent of the plume to the north/northwest and east of the ARCO parcel.

Below is a summary of key findings relative to the subject property Phase II ESA objectives for the ARCO Site. Phase II ESA analytical results are summarized in Tables 3 and 4 and illustrated in Figures 5 and 6.

### **7.1.2.2 Soil**

Thirteen soil samples from four explorations completed on FL358 and FL363, north/northwest and east of the ARCO parcel were analyzed for petroleum hydrocarbons, BETX and other VOCs, PAHs and select metals. Depths sampled ranged from 5.5 to 19 feet bgs. Gasoline-range hydrocarbons, BETX constituents and/or common gasoline-related VOCs (e.g., trimethylbenzenes, isopropylbenzenes, isopropyltoluene, butylbenzenes, and naphthalenes) were detected in eleven different soil samples from the four borings (Table 3). The detected concentrations exceeded the corresponding MTCA Method A cleanup levels in the following three samples from two of the four borings: FL363-B4-11-12 (gasoline-range hydrocarbons 73 mg/kg), FL363-B4-12-13 (gasoline-range hydrocarbons 1,300 mg/kg and xylenes 22.8 mg/kg), and FL363-B5-11.5-12.5 (gasoline-range hydrocarbons 500 mg/kg and ethylbenzene 11 mg/kg). The presence of gasoline-related soil contamination greater than MTCA cleanup levels at these locations and depths is not unexpected based on results from the prior ARCO studies. Soil sample results at FL363-B6 and FL363-B7 located directly east of the ARCO parcel did not identify gasoline-related constituents at concentrations greater than MTCA cleanup levels. This finding is consistent with the prior studies and available groundwater plume data indicating that the ARCO release did not extend offsite to the east of the ARCO parcel at concentrations greater than MTCA cleanup levels.

Diesel and/or lube oil-range petroleum hydrocarbons and a limited number of non-carcinogenic PAHs commonly associated with petroleum hydrocarbons were detected in eight soil samples from three of the four borings at concentrations less than MTCA Method A cleanup levels. These detections may be related to the ARCO service station, or to stormwater conveyance system leaks or fill material.

Relatively low concentrations of the following other VOCs were detected in one or more of the October 2017 soil samples (Table 3): 2-butanone (MEK), acetone and carbon disulfide. The detected concentrations were significantly less than MTCA cleanup levels. The compounds are suspected to be related to laboratory procedures or variability and therefore were not considered further with regard to the Phase II ESA conclusions.

### **7.1.2.3 Groundwater**

The depth to groundwater measured in the existing ARCO monitoring wells located on the subject property in October 2017 ranged from 9.7 to 12.4 feet bgs.

Gasoline-range hydrocarbons, BETX constituents and/or common gasoline-related VOCs (e.g., trimethylbenzenes, propylbenzenes, butylbenzenes, isopropyltoluene, and naphthalenes) were detected in the October 2017 groundwater samples from FL363-B4 and FL363-B5 (Table 4). The detected concentrations exceeded the corresponding MTCA Method A cleanup levels as follows: FL363-B4 (gasoline-range hydrocarbons 24,000 µg/l; 1,3,5-trimethylbenzene 230 µg/l;

naphthalenes 233 µg/l; and total xylenes 2,800 µg/l) and FL363-B5 (gasoline-range hydrocarbons 7,200 µg/l and benzene 510 µg/l). The presence of gasoline-related groundwater contamination greater than MTCA cleanup levels at these locations had not been previously documented based on the prior ARCO studies; however, the results are not unexpected given the proximity of the ARCO gasoline USTs at the north end of the ARCO parcel near FL363-B5 and the potential for contaminant migration via preferential utility pathways that may exist in the FL363 access road. Figure 2 shows revised plume boundaries based on interpretation of the most recent 2017 groundwater sampling data from FL363 and FL358 as well as other nearby FWLE parcels.

Gasoline-related constituents were not detected in the groundwater samples from FL363-B6, FL363-B7, ARCO-MW-31, ARCO-MW-32 and ARCO-MW-37 (Figure 6). These findings are generally consistent with the prior studies and available groundwater plume data.

Diesel- and/or lube oil-range petroleum hydrocarbons were detected at concentrations greater than MTCA Method A cleanup levels in groundwater samples from FL363-B4 and FL363-B5. Laboratory reports indicate that the diesel-range petroleum hydrocarbon results for these samples are due to gasoline extending in to the range quantified as diesel. Select PAH compounds (other than naphthalenes) were also detected at concentrations less than MTCA Method A cleanup levels in sample FL363-B4.

Diesel- and/or lube oil-range petroleum hydrocarbons were detected at concentrations less than MTCA Method A cleanup levels in groundwater samples from FL363-B6, ARCO-MW32 and ARCO-MW37. These detections may be related to the ARCO service station or to other possible sources such as stormwater or fill.

The VOC 1,3-dichlorobenzene was detected in one groundwater sample: FL363-B6 (0.31 µg/l). There is no published MTCA cleanup level for this compound in groundwater. The source of this VOC is unclear and would require additional sampling and analysis to evaluate further.

Total lead was detected in all four grab groundwater samples at concentrations ranging from 29 to 180 µg/l, greater than the MTCA Method A cleanup level of 15 µg/l. Grab groundwater samples analyzed for total lead may be influenced by suspended sediment in the samples. Total lead was either not detected or was less than the MTCA Method A cleanup level in the three ARCO groundwater monitoring well samples collected for the Phase II ESA.

## **7.2 Sound Transit Acquisition and Future Construction Recommendations**

Based on current design information for the FWLE project (HDR, provided in October 2017), Sound Transit plans to acquire parcels FL358, FL361 and FL363 and in full, with building impacts to existing structures. Sound Transit's proposed construction and development on the property

includes portions of the future Federal Way Transit Center and parking garage, new roads and utilities, a large stormwater vault and the light rail track, columns and guideway structure. The proposed footprint of the new structures is shown in Figure 3. Proposed construction and development activities by Sound Transit could change as project design is refined.

Assessment of fill as a potential source of contaminants on the subject property is planned in the future and will be presented in a future deliverable. Also, additional assessment of potential TSP impacts is planned for portions of the subject property not explored during the Phase II ESA. The data collected during this Phase II ESA effort will be evaluated with sample data obtained from the remainder of the property and summarized in a future deliverable.

### **7.2.1 Acquisition Conclusions and Recommendations**

The findings of the Phase II ESA indicate that a remediation cost estimate for cleanup is necessary for FL358, FL361 and FL363 for Sound Transit's acquisition because contaminants of concern related to a former on-site dry cleaner (Y Pay Mor Dry Cleaner) with a past documented release of PCE to soil and groundwater were confirmed to remain at concentrations greater than MTCA Method A cleanup levels in the vicinity of the former dry cleaner, and remain beneath the building footprint where the dry cleaner was located according to the Restrictive Covenants (see Section 1.3.1 and copies of the Restrictive Covenants in Appendix C).

We recommend resampling of the permanent monitoring wells on the subject property to assess seasonal variability. Additionally, the permanent monitoring wells should be surveyed and depth to groundwater measurements obtained to assess groundwater gradient.

We recommend a remedial investigation data gaps evaluation be completed to identify the site characterization data gaps that would need to be filled in order to evaluate remedial alternatives and select a preferred cleanup remedy under MTCA. Site investigation data gaps include the lateral and vertical extent of residual PCE and related compounds in soil and groundwater, hydrogeologic conditions relative to potential shallow and deeper aquifer systems, the potential for contaminant migration via preferential pathways such as underground utility corridors, as well as the potential for indoor air vapor intrusion relative to the existing shopping center building.

The Phase II ESA generally confirmed that the southern/southwestern downgradient extent of PCE and related contaminants in groundwater is within approximately 100 feet or less of the former dry cleaner location on FL358 and potentially FL363, and does not appear to extend onto the southern/southwestern-adjacent Wendy's restaurant parcel (FL360) at concentrations greater than MTCA Method A cleanup levels.

Sound Transit's acquisition and redevelopment on the property will need to consider the 1995 and 1998 Restrictive Covenants that are recorded for the subject property and appear on the

recent title report (Appendix C). Among the requirements of the covenants, the 1998 Covenant prohibits activities that interfere with the integrity of the remedial action and continued protection of human health and the environment.

We recommend Sound Transit consult with real estate and environmental legal counsel with respect to the potential purchase of the property, given the recorded covenants and their requirements, as well as potential cleanup cost recovery under MTCA.

If Sound Transit acquires the property, we recommend that Sound Transit determine Ecology's expectations relative to the former dry cleaner Site, because MTCA and industry practices in relation to NFA determinations and institutional controls have evolved and changed since 1998. In addition, consultation with Ecology is recommended because the 1998 covenant prohibits any activity that may result in the release or exposure of hazardous substances that remain on the property without prior written approval from Ecology.

The Y Pay Mor Dry Cleaners is identified in Ecology's confirmed and suspected contaminated sites database. The Phase II ESA findings do not indicate evidence of a new MTCA release, in our opinion.

The Phase II ESA identified gasoline-related contaminants in soil and groundwater likely related to the ARCO Site. Appropriate cleanup methods and associated costs are directly tied to cleanup of the source property (ARCO). A remediation cost estimate for the subject property should be developed based on cleanup cost estimates for the ARCO MTCA Cleanup Site.

### **7.2.2 Future Construction Recommendations**

An environmental cost estimate will be necessary for Sound Transit's planned construction because dry cleaner-related impacted soil and groundwater will likely be encountered beneath and in the vicinity of the former dry cleaner. Additionally, petroleum-impacted soil and groundwater are anticipated near the ARCO Site, and potentially may be present in other locations on the subject property, from potential sources including fill or contaminants associated with stormwater.

We recommend that fill, presumably placed to level out historic drainage features previously located on the subject property, be further evaluated for potential fill-related contaminants because there is extensive future excavation planned on the subject property associated with the stormwater vault and other proposed features. Excavation will generate soil that may not be suitable for reuse on the subject property or in another area of the FWLE project. The historic drainage features include a drainage channel approximately as shown in Figure 2 and a historic topographic low that existed in the southwestern portion of FL358 as of 1974, before the shopping center development.

Sound Transit will need to carefully consider the sequencing of the dry cleaner Site cleanup in

relation to future redevelopment excavation, backfilling and potential dewatering, to minimize potential recontamination occurrences, and to mitigate the potential for redevelopment to exacerbate existing contamination or contamination migration and result in added costs to Sound Transit.

As noted in the Findings discussion above, soil and groundwater with detections of spent dry cleaning solvent such as PCE and related breakdown products would be considered an F002-listed Dangerous Waste (Chapter 173-303 WAC) if excavated or removed during future property redevelopment, necessitating added costs for handling, testing, transport, tracking and disposal/discharge.

We recommend an impacted soil and groundwater handling plan be prepared prior to construction activities that outlines soil segregation, handling, stockpiling, and end use/disposal, as well as groundwater handling procedures for fluids recovered by dewatering. Follow-up chemical analytical testing will likely be needed for waste profiling and discharge/disposal waste acceptance and permitting. Ecology’s “Guidance for Remediation of Petroleum-Contaminated Soil” should be used as a guidance document for soil handling end use options for petroleum-related soil impacts. Additional regulatory requirements will apply if dry cleaner-related chlorinated solvents, which may classify as a F002-listed waste under the State Dangerous Waste Regulations are encountered in excavated soil or in groundwater recovered during dewatering.

The table below summarizes the Phase II ESA findings for the former dry cleaner and the ARCO Sites, and potentially impacted fill, relative to Sound Transit’s proposed acquisition and future construction.

Potential Sources of Contamination	Potential Source Within Acquisition Area	Potential Source Within Construction Area	Contaminated Soil and Groundwater Present	Impacted Soil and Groundwater Present	Remedial Cost Estimate Necessary For Acquisition	Remedial Cost Estimate Necessary For Construction
<b>On-Site Sources:</b> Former Y Pay Mor Dry Cleaner	Yes	Yes	Yes	Yes	Yes	Yes
<b>Other On-site Potential Sources:</b> Fill of unknown origin	Yes	Yes	Further assessment recommended	Further assessment recommended	Not likely	Potentially needed
<b>Off-Site Sources:</b> ARCO service station	Not on FL358, FL361 or FL363	Not on FL358, FL361 or FL363	Yes	Yes	Yes	Yes

## **8.0 Limitations and Guidelines for Use**

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These Limitations provide information to help you manage your risks with respect to the use of this report. Some clients, design professionals and contractors may not recognize that the geoscience practices (geotechnical engineering, geology and environmental science) are far less exact than other engineering and natural science disciplines. This lack of understanding can create unrealistic expectations that could lead to disappointments, claims and disputes. GeoEngineers includes these explanatory “limitations” provisions in our reports to help reduce such risks. Please confer with GeoEngineers if you are unclear how these “Limitations and Guidelines for Use” apply to your project or site.

This Phase II ESA has been prepared, in general accordance with the scope and limitations of the subcontract between HDR and GeoEngineers dated August 24, 2012, along with Amendments 1 through 9 and Agreement No. RTA/AE 044-12 between HDR and Sound Transit.

The Phase II ESA was not intended to identify and evaluate all soil and groundwater characterization data gaps associated with the two known sources of contamination associated with the subject property. Furthermore, the Phase II ESA was not intended as a dry cleaner remedial investigation to meet the current standard of practice for a MTCA Remedial Investigation.

This report has been prepared for the exclusive use of Sound Transit and their agents. This report is not intended for use by others, and the information contained herein is not applicable to other properties. No other party may rely on the product of our services unless we agree in advance to such reliance in writing. This is to provide our firm with reasonable protection against open-ended liability claims by third parties with whom there would otherwise be no contractual limits to their actions. Within the limitations of scope, schedule and budget, our services have been executed in accordance with our Agreement with the Client and generally accepted environmental practices in this area at the time this report was prepared.

Within the limitations of scope, schedule and budget, our services have been executed in accordance with generally accepted environmental science practices in this area at the time this report was prepared. The conclusions and opinions presented in this report are based on our professional knowledge, judgment and experience. No warranty, express or implied, applies to this report.

Any electronic form, facsimile or hard copy of the original document (email, text, table and/or figure), if provided, and any attachments should be considered a copy of the original document. The original document is stored by GeoEngineers, Inc. and will serve as the official document of record.

Please refer to the appendix titled “Report Limitations and Guidelines for Use” for additional information pertaining to use of this report.

## 9.0 References

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**Table 1**  
**Summary of Soil Chemical Analytical Results<sup>1</sup> - Y Pay Mor Dry Cleaner Explorations**  
 Sound Transit - Federal Way Link Extension FL358/FL361/FL363  
 Federal Way, Washington

Boring Identification	FL358-B1				FL358-B3					MTCA Method A/B Cleanup Level <sup>12</sup>	Naturally Occurring Background Metals in Puget Sound Soils <sup>15</sup>	
	Sample Identification <sup>2</sup>	Sample Date	Sample Start Depth (feet bgs)	Sample End Depth (feet bgs)	Sample Identification <sup>2</sup>	Sample Date	Sample Start Depth (feet bgs)	Sample End Depth (feet bgs)	Sample Identification <sup>2</sup>			Sample Date
<b>NWTPH-Gx<sup>3</sup> (mg/kg)</b>												
Gasoline-range hydrocarbons	--	--	--	--	--	--	--	--	--	--	30/100 <sup>13</sup>	N/A
<b>NWTPH-Dx<sup>4</sup> (mg/kg)</b>												
Diesel-range hydrocarbons	--	--	--	--	--	--	--	--	--	--	2,000	N/A
Lube Oil-range hydrocarbons	--	--	--	--	--	--	--	--	--	--	2,000	
<b>Metals<sup>5</sup> (mg/kg)</b>												
Arsenic	--	--	--	--	5.4 U	<b>46</b>	--	--	--	--	20	7
Lead	--	--	--	--	5.4 U	<b>11</b>	--	--	--	--	250	24
<b>BTEX<sup>6</sup> (mg/kg)</b>												
Benzene	--	--	--	--	--	--	--	--	--	--	0.03	N/A
Ethylbenzene	--	--	--	--	--	--	--	--	--	--	7	
Toluene	--	--	--	--	--	--	--	--	--	--	6	
Xylene, m-,p-	--	--	--	--	--	--	--	--	--	--	9	
Xylene, o-	--	--	--	--	--	--	--	--	--	--		
Total Xylenes <sup>7</sup>	--	--	--	--	--	--	--	--	--	--		
<b>VOCs<sup>8</sup> (mg/kg)</b>												
1,1,1,2-Tetrachloroethane	0.0011 U	0.00097 U	0.0010 U	0.00080 U	--	--	0.00098 U	0.0012 U	0.0015 U	38.5	N/A	
1,1,1-Trichloroethane	0.0011 U	0.00097 U	0.0010 U	0.00080 U	--	--	0.00098 U	0.0012 U	0.0015 U	2		
1,1,2,2-Tetrachloroethane	0.0011 U	0.057 U	0.0010 U	0.00080 U	--	--	0.00098 U	0.0012 U	0.068 U	5		
1,1,2-Trichloroethane	0.0011 U	0.00097 U	0.0010 U	0.00080 U	--	--	0.00098 U	0.0012 U	0.0015 U	17.5		
1,1-Dichloroethane	0.0011 U	0.00097 U	0.0010 U	0.00080 U	--	--	0.00098 U	0.0012 U	0.0015 U	175		
1,1-Dichloroethene	0.0011 U	0.00097 U	0.0010 U	0.00080 U	--	--	0.00098 U	0.0012 U	0.0015 U	4,000		
1,1-Dichloropropene	0.0011 U	0.00097 U	0.0010 U	0.00080 U	--	--	0.00098 U	0.0012 U	0.0015 U	NE		
1,2,3-Trichlorobenzene	0.0011 U	0.057 U	0.0010 U	0.00080 U	--	--	0.00098 U	0.0012 U	0.068 U	NE		
1,2,3-Trichloropropane	0.0011 U	0.057 U	0.0010 U	0.00080 U	--	--	0.00098 U	0.0012 U	0.068 U	0.0333		
1,2,4-Trichlorobenzene	0.0011 U	0.057 U	0.0010 U	0.00080 U	--	--	0.00098 U	0.0012 U	0.068 U	34.5		
1,2,4-Trimethylbenzene	0.0011 U	0.057 U	0.0010 U	0.00080 U	--	--	0.00098 U	0.0012 U	0.068 U	NE		
1,2-Dibromo-3-Chloropropane	0.0054 U	0.29 U	0.0050 U	0.0040 U	--	--	0.0049 U	0.0059 U	0.34 U	1.25		
1,2-Dibromoethane	0.0011 U	0.00097 U	0.0010 U	0.00080 U	--	--	0.00098 U	0.0012 U	0.0015 U	0.005		
1,2-Dichlorobenzene (o-Dichlorobenzene)	0.0011 U	0.057 U	0.0010 U	0.00080 U	--	--	0.00098 U	0.0012 U	0.068 U	7,200		
1,2-Dichloroethane	0.0011 U	0.00097 U	0.0010 U	0.00080 U	--	--	0.00098 U	0.0012 U	0.0015 U	11		
1,2-Dichloropropane	0.0011 U	0.00097 U	0.0010 U	0.00080 U	--	--	0.00098 U	0.0012 U	0.0015 U	27.8		
1,3,5-Trimethylbenzene	0.0011 U	0.057 U	0.0010 U	0.00080 U	--	--	0.00098 U	0.0012 U	0.068 U	800		
1,3-Dichlorobenzene (m-Dichlorobenzene)	0.0011 U	0.057 U	0.0010 U	0.00080 U	--	--	0.00098 U	0.0012 U	0.068 U	NE		
1,3-Dichloropropane	0.0011 U	0.00097 U	0.0010 U	0.00080 U	--	--	0.00098 U	0.0012 U	0.0015 U	NE		
1,4-Dichlorobenzene (p-Dichlorobenzene)	0.0011 U	0.057 U	0.0010 U	0.00080 U	--	--	0.00098 U	0.0012 U	0.068 U	185		
2,2-Dichloropropane	0.0011 U	0.00097 U	0.0010 U	0.00080 U	--	--	0.00098 U	0.0012 U	0.0015 U	NE		

Boring Identification	FL358-B1				FL358-B3					MTCA Method A/B Cleanup Level <sup>12</sup>	Naturally Occurring Background Metals in Puget Sound Soils <sup>15</sup>	
	Sample Identification <sup>2</sup>	FL358-B1-0.5-1	FL358-B1-5-6	FL358-B1-10-11	FL358-B1-13-14	FL358-B3-0-0.5	FL358-B3-0.5-1	FL358-B3-5-6	FL358-B3-7-8			FL358-B3-12-13
Sample Date	10/5/2017	10/5/2017	10/5/2017	10/5/2017	10/5/2017	10/5/2017	10/5/2017	10/5/2017	10/5/2017	10/5/2017		
Sample Start Depth (feet bgs)	0.5	5.0	10	13	0.0	0.5	5.0	7.0	12			
Sample End Depth (feet bgs)	1.0	6.0	11	14	0.5	1.0	6.0	8.0	13			
2-Butanone (MEK)	0.0054 U	<b>0.0067</b>	0.0050 U	0.0040 U	--	--	<b>0.0074</b>	<b>0.049</b>	<b>0.070</b>	48,000	N/A	
2-Chloroethyl vinyl ether	0.0054 U	0.0048 U	0.0050 U	0.0040 U	--	--	0.0049 U	0.0059 U	0.0074 U	NE		
2-Chlorotoluene	0.0011 U	0.057 U	0.0010 U	0.00080 U	--	--	0.00098 U	0.0012 U	0.068 U	1,600		
2-Hexanone	0.0054 U	0.0048 U	0.0050 U	0.0040 U	--	--	0.0049 U	0.0059 U	0.0074 U	NE		
4-Chlorotoluene	0.0011 U	0.057 U	0.0010 U	0.00080 U	--	--	0.00098 U	0.0012 U	0.068 U	NE		
4-Methyl-2-Pentanone (Methyl isobutyl ketone)	0.0054 U	0.0048 U	0.0050 U	0.0040 U	--	--	0.0049 U	0.0059 U	0.0074 U	6,400		
Acetone <sup>9</sup>	<b>0.011</b>	<b>0.060</b>	<b>0.0060</b>	0.0040 U	--	--	<b>0.058</b>	<b>0.16</b>	<b>0.46</b>	72,000		
Benzene	0.0011 U	<b>0.0010</b>	0.0010 U	0.00080 U	--	--	0.00098 U	0.0012 U	0.0015 U	0.03		
Bromobenzene	0.0011 U	0.057 U	0.0010 U	0.00080 U	--	--	0.00098 U	0.0012 U	0.068 U	NE		
Bromochloromethane	0.0011 U	0.00097 U	0.0010 U	0.00080 U	--	--	0.00098 U	0.0012 U	0.0015 U	NE		
Bromodichloromethane	0.0011 U	0.00097 U	0.0010 U	0.00080 U	--	--	0.00098 U	0.0012 U	0.0015 U	16.1		
Bromoform (Tribromomethane)	0.0054 U	0.0048 U	0.0050 U	0.0040 U	--	--	0.0049 U	0.0059 U	0.0074 U	127		
Bromomethane	0.0011 U	0.00097 U	0.0010 U	0.00080 U	--	--	0.00098 U	0.0012 U	0.0015 U	112		
Carbon Disulfide	0.0011 U	<b>0.0012</b>	0.0010 U	0.00080 U	--	--	0.00098 U	<b>0.0015</b>	<b>0.0020</b>	8,000		
Carbon Tetrachloride	0.0011 U	0.00097 U	0.0010 U	0.00080 U	--	--	0.00098 U	0.0012 U	0.0015 U	14.3		
Chlorobenzene	0.0011 U	0.00097 U	0.0010 U	0.00080 U	--	--	0.00098 U	0.0012 U	0.0015 U	1,600		
Chloroethane	0.0054 U	0.0048 U	0.0050 U	0.0040 U	--	--	0.0049 U	0.0059 U	0.0074 U	NE		
Chloroform	0.0011 U	0.00097 U	0.0010 U	0.00080 U	--	--	0.00098 U	0.0012 U	0.0015 U	32.3		
Chloromethane	0.0073 U	0.0066 U	0.0068 U	0.0054 U	--	--	0.0066 U	0.0080 U	0.011 U	NE		
cis-1,2-Dichloroethene	0.0011 U	<b>0.0053</b>	<b>0.014</b>	<b>0.0043</b>	--	--	0.00098 U	0.0012 U	0.0015 U	160		
cis-1,3-Dichloropropene	0.0011 U	0.00097 U	0.0010 U	0.00080 U	--	--	0.00098 U	0.0012 U	0.0015 U	NE		
Dibromochloromethane	0.0011 U	0.00097 U	0.0010 U	0.00080 U	--	--	0.00098 U	0.0012 U	0.0015 U	11.9		
Dibromomethane	0.0011 U	0.00097 U	0.0010 U	0.00080 U	--	--	0.00098 U	0.0012 U	0.0015 U	800		
Dichlorodifluoromethane (CFC-12)	0.0026 U	0.0023 U	0.0024 U	0.0019 U	--	--	0.0023 U	0.0028 U	0.0040 U	16,000		
Ethylbenzene	0.0011 U	0.00097 U	0.0010 U	0.00080 U	--	--	0.00098 U	0.0012 U	<b>0.014</b>	6		
Hexachlorobutadiene	0.0054 U	0.29 U	0.0050 U	0.0040 U	--	--	0.0049 U	0.0059 U	0.34 U	12.8		
Isopropylbenzene (Cumene)	0.0011 U	0.00097 U	0.0010 U	0.00080 U	--	--	0.00098 U	0.0012 U	0.0015 U	8,000		
Methyl Iodide (Iodomethane)	0.0079 U	0.0072 U	0.0074 U	0.0059 U	--	--	0.0072 U	0.0087 U	0.011 U	NE		
Methyl t-butyl ether	0.0011 U	0.00097 U	0.0010 U	0.00080 U	--	--	0.00098 U	0.0012 U	0.0015 U	0.1		
Methylene Chloride	0.0054 U	0.0048 U	0.0050 U	0.0040 U	--	--	0.0049 U	0.0059 U	0.0074 U	0.02		
Naphthalene	0.0011 U	0.057 U	0.0010 U	0.00080 U	--	--	0.00098 U	0.0012 U	0.068 U	5		
n-Butylbenzene	0.0011 U	0.057 U	0.0010 U	0.00080 U	--	--	0.00098 U	0.0012 U	0.068 U	4,000		
n-Propylbenzene	0.0011 U	0.057 U	0.0010 U	0.00080 U	--	--	0.00098 U	0.0012 U	0.068 U	8,000		
p-Isopropyltoluene	0.0011 U	0.057 U	0.0010 U	0.00080 U	--	--	0.00098 U	0.0012 U	<b>96</b>	NE		
Sec-Butylbenzene	0.0011 U	0.057 U	0.0010 U	0.00080 U	--	--	0.00098 U	0.0012 U	0.068 U	8,000		
Styrene	0.0011 U	0.00097 U	0.0010 U	0.00080 U	--	--	0.00098 U	0.0012 U	0.0015 U	16,000		
Tert-Butylbenzene	0.0011 U	0.057 U	0.0010 U	0.00080 U	--	--	0.00098 U	0.0012 U	0.068 U	8,000		
Tetrachloroethene	0.0011 U	0.00097 U	<b>0.016</b>	<b>0.066</b>	--	--	0.00098 U	0.0012 U	0.0015 U	0.05		
Toluene	0.0054 U	0.0048 U	0.0050 U	0.0040 U	--	--	0.0049 U	0.0059 U	<b>0.032</b>	7		
Trans-1,2-Dichloroethene	0.0011 U	0.00097 U	0.0010 U	0.00080 U	--	--	0.00098 U	0.0012 U	0.0015 U	1,600		
Trans-1,3-Dichloropropene	0.0011 U	0.00097 U	0.0010 U	0.00080 U	--	--	0.00098 U	0.0012 U	0.0015 U	NE		
Trichloroethene	0.0011 U	0.00097 U	<b>0.0076</b>	<b>0.0022</b>	--	--	0.00098 U	0.0012 U	0.0015 U	0.03		
Trichlorofluoromethane (CFC-11)	0.0011 U	0.00097 U	0.0010 U	0.00080 U	--	--	0.00098 U	0.0012 U	0.0015 U	24,000		
Vinyl Acetate	0.0054 U	0.0048 U	0.0050 U	0.0040 U	--	--	0.0049 U	0.0059 U	0.0074 U	80,000		

Boring Identification	FL358-B1				FL358-B3					MTCA Method A/B Cleanup Level <sup>12</sup>	Naturally Occurring Background Metals in Puget Sound Soils <sup>15</sup>		
	Sample Identification <sup>2</sup>	FL358-B1-0.5-1	FL358-B1-5-6	FL358-B1-10-11	FL358-B1-13-14	FL358-B3-0-0.5	FL358-B3-0.5-1	FL358-B3-5-6	FL358-B3-7-8			FL358-B3-12-13	
Sample Date	10/5/2017	10/5/2017	10/5/2017	10/5/2017	10/5/2017	10/5/2017	10/5/2017	10/5/2017	10/5/2017	10/5/2017			
Sample Start Depth (feet bgs)	0.5	5.0	10	13	0.0	0.5	5.0	7.0	12				
Sample End Depth (feet bgs)	1.0	6.0	11	14	0.5	1.0	6.0	8.0	13				
Vinyl Chloride	0.0011 U	0.00097 U	0.0010 U	0.00080 U	--	--	0.00098 U	0.0012 U	0.0019 U	240			
Xylene, m-,p-	0.0021 U	0.0019 U	0.0020 U	0.0016 U	--	--	0.0020 U	0.0024 U	0.14 U	9	N/A		
Xylene, o-	0.0011 U	0.00097 U	0.0010 U	0.00080 U	--	--	0.00098 U	0.0012 U	0.0015 U				
Total Xylenes <sup>7</sup>	0.0021 U	0.0019 U	0.0020 U	0.0016 U	--	--	0.0020 U	0.0024 U	0.14 U				
<b>PAHs<sup>10</sup> (mg/kg)</b>													
1-Methylnaphthalene	--	--	--	--	--	--	--	--	--	5	N/A		
2-Methylnaphthalene	--	--	--	--	--	--	--	--	--				
Naphthalene	--	--	--	--	--	--	--	--	--				
Total Naphthalenes <sup>11</sup>	--	--	--	--	--	--	--	--	--				
Acenaphthene	--	--	--	--	--	--	--	--	--	4,800			
Acenaphthylene	--	--	--	--	--	--	--	--	--	NE			
Anthracene	--	--	--	--	--	--	--	--	--	24,000			
Benzo(a)anthracene	--	--	--	--	--	--	--	--	--	See cPAHs			
Benzo(a)pyrene	--	--	--	--	--	--	--	--	--	See cPAHs			
Benzo(b)fluoranthene	--	--	--	--	--	--	--	--	--	See cPAHs			
Benzo(g,h,i)perylene	--	--	--	--	--	--	--	--	--	NE			
Benzo(j,k)fluoranthene	--	--	--	--	--	--	--	--	--	See cPAHs			
Chrysene	--	--	--	--	--	--	--	--	--	See cPAHs			
Dibenzo(a,h)anthracene	--	--	--	--	--	--	--	--	--	See cPAHs			
Fluoranthene	--	--	--	--	--	--	--	--	--	3,200			
Fluorene	--	--	--	--	--	--	--	--	--	3,200			
Indeno(1,2,3-c,d)pyrene	--	--	--	--	--	--	--	--	--	See cPAHs			
Phenanthrene	--	--	--	--	--	--	--	--	--	NE			
Pyrene	--	--	--	--	--	--	--	--	--	2,400			
cPAHs (benzo(a)pyrene toxicity equivalent concentration) <sup>14</sup>	--	--	--	--	--	--	--	--	--	0.1			

Boring Identification	FL358-MW1						FL358-MW2					MTCA Method A/B Cleanup Level <sup>12</sup>	Naturally Occurring Background Metals in Puget Sound Soils <sup>15</sup>
	Sample Identification <sup>2</sup>	FL358-MW1-0-0.5	FL358-MW1-0.5-1	FL358-MW1-1.5-2.5	FL358-MW1-5-6	FL358-MW1-12-13	FL358-MW1-19-20	FL358-MW2-0-0.5	FL358-MW2-0.5-1	FL358-MW2-1.5-2.5	FL358-MW2-9-10		
Sample Date	10/2/2017	10/2/2017	10/2/2017	10/2/2017	10/2/2017	10/2/2017	10/2/2017	10/2/2017	10/2/2017	10/2/2017	10/2/2017	10/2/2017	
Sample Start Depth (feet bgs)	0.0	0.5	1.5	5.0	12	19	0.0	0.5	1.5	9.0	13		
Sample End Depth (feet bgs)	0.5	1.0	2.5	6.0	13	20	0.5	1.0	2.5	10	14		
<b>NWTPH-Gx<sup>3</sup> (mg/kg)</b>													
Gasoline-range hydrocarbons	--	--	5.2 U	6.5 U	--	--	--	--	--	--	--	30/100 <sup>13</sup>	N/A
<b>NWTPH-Dx<sup>4</sup> (mg/kg)</b>													
Diesel-range hydrocarbons	--	--	29 U	30 U	--	--	--	--	--	--	--	2,000	N/A
Lube Oil-range hydrocarbons	--	--	100	79	--	--	--	--	--	--	--	2,000	
<b>Metals<sup>5</sup> (mg/kg)</b>													
Arsenic	2.9 U	2.8 U	--	--	--	--	2.8 U	2.8 U	--	--	--	20	7
Lead	5.8 U	5.7 U	--	--	--	--	5.6 U	5.5 U	--	--	--	250	24
<b>BTEX<sup>6</sup> (mg/kg)</b>													
Benzene	--	--	--	--	--	--	--	--	--	--	--	0.03	N/A
Ethylbenzene	--	--	--	--	--	--	--	--	--	--	--	7	
Toluene	--	--	--	--	--	--	--	--	--	--	--	6	
Xylene, m-,p-	--	--	--	--	--	--	--	--	--	--	--	9	
Xylene, o-	--	--	--	--	--	--	--	--	--	--	--		
Total Xylenes <sup>7</sup>	--	--	--	--	--	--	--	--	--	--	--		
<b>VOCs<sup>8</sup> (mg/kg)</b>													
1,1,1,2-Tetrachloroethane	--	--	0.00098 U	0.00091 U	0.00099 U	0.00084 U	--	--	0.0011 U	0.00087 U	0.00088 U	38.5	N/A
1,1,1-Trichloroethane	--	--	0.00098 U	0.00091 U	0.00099 U	0.00084 U	--	--	0.0011 U	0.00087 U	0.00088 U	2	
1,1,2,2-Tetrachloroethane	--	--	0.00098 U	0.00091 U	0.00099 U	0.00084 U	--	--	0.065 U	0.00087 U	0.00088 U	5	
1,1,2-Trichloroethane	--	--	0.00098 U	0.00091 U	0.00099 U	0.00084 U	--	--	0.0011 U	0.00087 U	0.00088 U	17.5	
1,1-Dichloroethane	--	--	0.00098 U	0.00091 U	0.00099 U	0.00084 U	--	--	0.0011 U	0.00087 U	0.00088 U	175	
1,1-Dichloroethene	--	--	0.00098 U	0.00091 U	0.00099 U	0.00084 U	--	--	0.0011 U	0.00087 U	0.00088 U	4,000	
1,1-Dichloropropene	--	--	0.00098 U	0.00091 U	0.00099 U	0.00084 U	--	--	0.0011 U	0.00087 U	0.00088 U	NE	
1,2,3-Trichlorobenzene	--	--	0.00098 U	0.00091 U	0.00099 U	0.00084 U	--	--	0.065 U	0.00087 U	0.00088 U	NE	
1,2,3-Trichloropropane	--	--	0.00098 U	0.00091 U	0.00099 U	0.00084 U	--	--	0.065 U	0.00087 U	0.00088 U	0.0333	
1,2,4-Trichlorobenzene	--	--	0.00098 U	0.00091 U	0.00099 U	0.00084 U	--	--	0.065 U	0.00087 U	0.00088 U	34.5	
1,2,4-Trimethylbenzene	--	--	0.00098 U	0.00091 U	0.00099 U	0.00084 U	--	--	0.065 U	0.00087 U	0.00088 U	NE	
1,2-Dibromo-3-Chloropropane	--	--	0.0049 U	0.0045 U	0.0049 U	0.0042 U	--	--	0.32 U	0.0044 U	0.0044 U	1.25	
1,2-Dibromoethane	--	--	0.00098 U	0.00091 U	0.00099 U	0.00084 U	--	--	0.0011 U	0.00087 U	0.00088 U	0.005	
1,2-Dichlorobenzene (o-Dichlorobenzene)	--	--	0.00098 U	0.00091 U	0.00099 U	0.00084 U	--	--	0.065 U	0.00087 U	0.00088 U	7,200	
1,2-Dichloroethane	--	--	0.00098 U	0.00091 U	0.00099 U	0.00084 U	--	--	0.0011 U	0.00087 U	0.00088 U	11	
1,2-Dichloropropane	--	--	0.00098 U	0.00091 U	0.00099 U	0.00084 U	--	--	0.0011 U	0.00087 U	0.00088 U	27.8	
1,3,5-Trimethylbenzene	--	--	0.00098 U	0.00091 U	0.00099 U	0.00084 U	--	--	0.065 U	0.00087 U	0.00088 U	800	
1,3-Dichlorobenzene (m-Dichlorobenzene)	--	--	0.00098 U	0.00091 U	0.00099 U	0.00084 U	--	--	0.065 U	0.00087 U	0.00088 U	NE	
1,3-Dichloropropane	--	--	0.00098 U	0.00091 U	0.00099 U	0.00084 U	--	--	0.0011 U	0.00087 U	0.00088 U	NE	
1,4-Dichlorobenzene (p-Dichlorobenzene)	--	--	0.00098 U	0.00091 U	0.00099 U	0.00084 U	--	--	0.065 U	0.00087 U	0.00088 U	185	
2,2-Dichloropropane	--	--	0.00098 U	0.00091 U	0.00099 U	0.00084 U	--	--	0.0011 U	0.00087 U	0.00088 U	NE	

Boring Identification	FL358-MW1						FL358-MW2					MTCA Method A/B Cleanup Level <sup>12</sup>	Naturally Occurring Background Metals in Puget Sound Soils <sup>15</sup>
	Sample Identification <sup>2</sup>	FL358-MW1-0-0.5	FL358-MW1-0.5-1	FL358-MW1-1.5-2.5	FL358-MW1-5-6	FL358-MW1-12-13	FL358-MW1-19-20	FL358-MW2-0-0.5	FL358-MW2-0.5-1	FL358-MW2-1.5-2.5	FL358-MW2-9-10		
Sample Date	10/2/2017	10/2/2017	10/2/2017	10/2/2017	10/2/2017	10/2/2017	10/2/2017	10/2/2017	10/2/2017	10/2/2017	10/2/2017	10/2/2017	
Sample Start Depth (feet bgs)	0.0	0.5	1.5	5.0	12	19	0.0	0.5	1.5	9.0	13		
Sample End Depth (feet bgs)	0.5	1.0	2.5	6.0	13	20	0.5	1.0	2.5	10	14		
2-Butanone (MEK)	--	--	<b>0.024</b>	<b>0.039</b>	0.0049 U	0.0042 U	--	--	<b>0.018</b>	0.0044 U	0.0044 U	48,000	
2-Chloroethyl vinyl ether	--	--	0.0049 U	0.0045 U	0.0049 U	0.0042 U	--	--	0.0053 U	0.0044 U	0.0044 U	NE	
2-Chlorotoluene	--	--	0.00098 U	0.00091 U	0.00099 U	0.00084 U	--	--	0.065 U	0.00087 U	0.00088 U	1,600	
2-Hexanone	--	--	0.0049 U	0.0045 U	0.0049 U	0.0042 U	--	--	0.0053 U	0.0044 U	0.0044 U	NE	
4-Chlorotoluene	--	--	0.00098 U	0.00091 U	0.00099 U	0.00084 U	--	--	0.065 U	0.00087 U	0.00088 U	NE	
4-Methyl-2-Pentanone (Methyl isobutyl ketone)	--	--	0.0049 U	0.0045 U	0.0049 U	0.0042 U	--	--	0.0053 U	0.0044 U	0.0044 U	6,400	
Acetone <sup>9</sup>	--	--	<b>0.20</b>	<b>0.34</b>	<b>0.069</b>	<b>0.014</b>	--	--	<b>0.18</b>	<b>0.052</b>	<b>0.018</b>	72,000	
Benzene	--	--	0.00098 U	0.00091 U	0.00099 U	0.00084 U	--	--	0.0011 U	0.00087 U	0.00088 U	0.03	
Bromobenzene	--	--	0.00098 U	0.00091 U	0.00099 U	0.00084 U	--	--	0.065 U	0.00087 U	0.00088 U	NE	
Bromochloromethane	--	--	0.00098 U	0.00091 U	0.00099 U	0.00084 U	--	--	0.0011 U	0.00087 U	0.00088 U	NE	
Bromodichloromethane	--	--	0.00098 U	0.00091 U	0.00099 U	0.00084 U	--	--	0.0011 U	0.00087 U	0.00088 U	16.1	
Bromoform (Tribromomethane)	--	--	0.0049 U	0.0045 U	0.0049 U	0.0042 U	--	--	0.0053 U	0.0044 U	0.0044 U	127	
Bromomethane	--	--	0.0013 U	0.0012 U	0.0013 U	0.0011 U	--	--	0.0014 U	0.0011 U	0.0011 U	112	
Carbon Disulfide	--	--	0.0015 U	<b>0.0018</b>	0.0015 U	0.0013 U	--	--	0.0016 U	0.0013 U	0.0013 U	8,000	
Carbon Tetrachloride	--	--	0.00098 U	0.00091 U	0.00099 U	0.00084 U	--	--	0.0011 U	0.00087 U	0.00088 U	14.3	
Chlorobenzene	--	--	0.00098 U	0.00091 U	0.00099 U	0.00084 U	--	--	0.0011 U	0.00087 U	0.00088 U	1,600	
Chloroethane	--	--	0.0049 U	0.0045 U	0.0049 U	0.0042 U	--	--	0.0053 U	0.0044 U	0.0044 U	NE	
Chloroform	--	--	0.00098 U	0.00091 U	0.00099 U	0.00084 U	--	--	0.0011 U	0.00087 U	0.00088 U	32.3	
Chloromethane	--	--	0.0049 U	0.0045 U	0.0049 U	0.0042 U	--	--	0.0053 U	0.0044 U	0.0044 U	NE	
cis-1,2-Dichloroethene	--	--	0.00098 U	0.00091 U	0.00099 U	<b>0.0016</b>	--	--	0.0011 U	0.00087 U	0.00088 U	160	
cis-1,3-Dichloropropene	--	--	0.00098 U	0.00091 U	0.00099 U	0.00084 U	--	--	0.0011 U	0.00087 U	0.00088 U	NE	
Dibromochloromethane	--	--	0.00098 U	0.00091 U	0.00099 U	0.00084 U	--	--	0.0011 U	0.00087 U	0.00088 U	11.9	
Dibromomethane	--	--	0.00098 U	0.00091 U	0.00099 U	0.00084 U	--	--	0.0011 U	0.00087 U	0.00088 U	800	
Dichlorodifluoromethane (CFC-12)	--	--	0.0020 U	0.0018 U	0.0020 U	0.0017 U	--	--	0.0021 U	0.0017 U	0.0018 U	16,000	
Ethylbenzene	--	--	0.00098 U	0.00091 U	0.00099 U	0.00084 U	--	--	0.0011 U	0.00087 U	0.00088 U	6	
Hexachlorobutadiene	--	--	0.0049 U	0.0045 U	0.0049 U	0.0042 U	--	--	0.32 U	0.0044 U	0.0044 U	12.8	
Isopropylbenzene (Cumene)	--	--	0.00098 U	0.00091 U	0.00099 U	0.00084 U	--	--	0.0011 U	0.00087 U	0.00088 U	8,000	
Methyl Iodide (Iodomethane)	--	--	0.0049 U	0.0045 U	0.0049 U	0.0042 U	--	--	0.0053 U	0.0044 U	0.0044 U	NE	
Methyl t-butyl ether	--	--	0.00098 U	0.00091 U	0.00099 U	0.00084 U	--	--	0.0011 U	0.00087 U	0.00088 U	0.1	
Methylene Chloride	--	--	0.0098 U	0.0091 U	0.0099 U	0.0084 U	--	--	0.011 U	0.0087 U	0.0088 U	0.02	
Naphthalene	--	--	0.00098 U	0.00091 U	0.00099 U	0.00084 U	--	--	0.065 U	0.00087 U	0.00088 U	5	
n-Butylbenzene	--	--	0.00098 U	0.00091 U	0.00099 U	0.00084 U	--	--	0.065 U	0.00087 U	0.00088 U	4,000	
n-Propylbenzene	--	--	0.00098 U	0.00091 U	0.00099 U	0.00084 U	--	--	0.065 U	0.00087 U	0.00088 U	8,000	
p-Isopropyltoluene	--	--	<b>0.0028</b>	<b>0.017</b>	0.00099 U	0.00084 U	--	--	0.065 U	0.00087 U	0.00088 U	NE	
Sec-Butylbenzene	--	--	0.00098 U	0.00091 U	0.00099 U	0.00084 U	--	--	0.065 U	0.00087 U	0.00088 U	8,000	
Styrene	--	--	0.00098 U	0.00091 U	0.00099 U	0.00084 U	--	--	0.0011 U	0.00087 U	0.00088 U	16,000	
Tert-Butylbenzene	--	--	0.00098 U	0.00091 U	0.00099 U	0.00084 U	--	--	0.065 U	0.00087 U	0.00088 U	8,000	
Tetrachloroethene	--	--	0.00098 U	0.00091 U	0.00099 U	<b>0.0049</b>	--	--	0.0011 U	0.00087 U	0.00088 U	0.05	
Toluene	--	--	0.0049 U	0.0045 U	0.0049 U	0.0042 U	--	--	0.0053 U	0.0044 U	0.0044 U	7	
Trans-1,2-Dichloroethene	--	--	0.00098 U	0.00091 U	0.00099 U	0.00084 U	--	--	0.0011 U	0.00087 U	0.00088 U	1,600	
Trans-1,3-Dichloropropene	--	--	0.00098 U	0.00091 U	0.00099 U	0.00084 U	--	--	0.0011 U	0.00087 U	0.00088 U	NE	
Trichloroethene	--	--	0.00098 U	0.00091 U	0.00099 U	<b>0.0033</b>	--	--	0.0011 U	0.00087 U	0.00088 U	0.03	
Trichlorofluoromethane (CFC-11)	--	--	0.00098 U	0.00091 U	0.00099 U	0.00084 U	--	--	0.0011 U	0.00087 U	0.00088 U	24,000	
Vinyl Acetate	--	--	0.0049 U	0.0045 U	0.0049 U	0.0042 U	--	--	0.0053 U	0.0044 U	0.0044 U	80,000	

N/A

Boring Identification	FL358-MW1						FL358-MW2					MTCA Method A/B Cleanup Level <sup>12</sup>	Naturally Occurring Background Metals in Puget Sound Soils <sup>15</sup>
	Sample Identification <sup>2</sup>	FL358-MW1-0-0.5	FL358-MW1-0.5-1	FL358-MW1-1.5-2.5	FL358-MW1-5-6	FL358-MW1-12-13	FL358-MW1-19-20	FL358-MW2-0-0.5	FL358-MW2-0.5-1	FL358-MW2-1.5-2.5	FL358-MW2-9-10		
Sample Date	10/2/2017	10/2/2017	10/2/2017	10/2/2017	10/2/2017	10/2/2017	10/2/2017	10/2/2017	10/2/2017	10/2/2017	10/2/2017	10/2/2017	
Sample Start Depth (feet bgs)	0.0	0.5	1.5	5.0	12	19	0.0	0.5	1.5	9.0	13		
Sample End Depth (feet bgs)	0.5	1.0	2.5	6.0	13	20	0.5	1.0	2.5	10	14		
Vinyl Chloride	--	--	0.00098 U	0.00091 U	0.00099 U	0.00084 U	--	--	0.0011 U	0.00087 U	0.00088 U	240	N/A
Xylene, m-,p-	--	--	0.0020 U	0.0018 U	0.0020 U	0.0017 U	--	--	0.0021 U	0.0017 U	0.0018 U	9	
Xylene, o-	--	--	0.00098 U	0.00091 U	0.00099 U	0.00084 U	--	--	0.0011 U	0.00087 U	0.00088 U		
Total Xylenes <sup>7</sup>	--	--	0.0020 U	0.0018 U	0.0020 U	0.0017 U	--	--	0.0021 U	0.0017 U	0.0018 U		
<b>PAHs<sup>10</sup> (mg/kg)</b>													N/A
1-Methylnaphthalene	--	--	--	--	--	--	--	--	--	--	--	5	
2-Methylnaphthalene	--	--	--	--	--	--	--	--	--	--	--		
Naphthalene	--	--	--	--	--	--	--	--	--	--	--		
Total Naphthalenes <sup>11</sup>	--	--	--	--	--	--	--	--	--	--	--		
Acenaphthene	--	--	--	--	--	--	--	--	--	--	--	4,800	
Acenaphthylene	--	--	--	--	--	--	--	--	--	--	--	NE	
Anthracene	--	--	--	--	--	--	--	--	--	--	--	24,000	
Benzo(a)anthracene	--	--	--	--	--	--	--	--	--	--	--	See cPAHs	
Benzo(a)pyrene	--	--	--	--	--	--	--	--	--	--	--	See cPAHs	
Benzo(b)fluoranthene	--	--	--	--	--	--	--	--	--	--	--	See cPAHs	
Benzo(g,h,i)perylene	--	--	--	--	--	--	--	--	--	--	--	NE	
Benzo(j,k)fluoranthene	--	--	--	--	--	--	--	--	--	--	--	See cPAHs	
Chrysene	--	--	--	--	--	--	--	--	--	--	--	See cPAHs	
Dibenzo(a,h)anthracene	--	--	--	--	--	--	--	--	--	--	--	See cPAHs	
Fluoranthene	--	--	--	--	--	--	--	--	--	--	--	3,200	
Fluorene	--	--	--	--	--	--	--	--	--	--	--	3,200	
Indeno(1,2,3-c,d)pyrene	--	--	--	--	--	--	--	--	--	--	--	See cPAHs	
Phenanthrene	--	--	--	--	--	--	--	--	--	--	--	NE	
Pyrene	--	--	--	--	--	--	--	--	--	--	--	2,400	
cPAHs (benzo(a)pyrene toxicity equivalent concentration) <sup>14</sup>	--	--	--	--	--	--	--	--	--	--	--	0.1	

Boring Identification	FL358-MW3					FL358-MW4				MTCA Method A/B Cleanup Level <sup>12</sup>	Naturally Occurring Background Metals in Puget Sound Soils <sup>15</sup>	
	Sample Identification <sup>2</sup>	FL358-MW3-0-0.5	FL358-MW3-0.5-1	FL358-MW3-4-5	FL358-MW3-7-8	FL358-MW3-11-12	FL358-MW4-0-0.5	FL358-MW4-0.5-1	FL358-MW4-6.5-7.5			FL358-MW4-8.5-9.5
Sample Date	10/3/2017	10/3/2017	10/3/2017	10/3/2017	10/3/2017	10/3/2017	10/3/2017	10/3/2017	10/3/2017	10/3/2017		
Sample Start Depth (feet bgs)	0.0	0.5	4.0	7.0	11	0.0	0.5	6.5	8.5			
Sample End Depth (feet bgs)	0.5	1.0	5.0	8.0	12	0.5	1.0	7.5	9.5			
<b>NWTPH-Gx<sup>3</sup> (mg/kg)</b>												
Gasoline-range hydrocarbons	--	--	--	--	--	--	--	--	--	30/100 <sup>13</sup>	N/A	
<b>NWTPH-Dx<sup>4</sup> (mg/kg)</b>												
Diesel-range hydrocarbons	--	--	--	--	--	--	--	--	--	2,000	N/A	
Lube Oil-range hydrocarbons	--	--	--	--	--	--	--	--	--	2,000	N/A	
<b>Metals<sup>5</sup> (mg/kg)</b>												
Arsenic	6.2	2.7 U	--	--	--	2.8 U	2.8 U	--	--	20	7	
Lead	5.3 U	5.3 U	--	--	--	5.5 U	5.5 U	--	--	250	24	
<b>BTEX<sup>6</sup> (mg/kg)</b>												
Benzene	--	--	--	--	--	--	--	--	--	0.03	N/A	
Ethylbenzene	--	--	--	--	--	--	--	--	--	7		
Toluene	--	--	--	--	--	--	--	--	--	6		
Xylene, m-,p-	--	--	--	--	--	--	--	--	--	9		
Xylene, o-	--	--	--	--	--	--	--	--	--			
Total Xylenes <sup>7</sup>	--	--	--	--	--	--	--	--	--			
<b>VOCs<sup>8</sup> (mg/kg)</b>												
1,1,1,2-Tetrachloroethane	--	--	0.00095 U	0.00089 U	0.00078 U	--	--	0.0010 U	0.00094 U	38.5	N/A	
1,1,1-Trichloroethane	--	--	0.00095 U	0.00089 U	0.00078 U	--	--	0.0010 U	0.00094 U	2		
1,1,2,2-Tetrachloroethane	--	--	0.00095 U	0.00089 U	0.00078 U	--	--	0.065 U	0.00094 U	5		
1,1,2-Trichloroethane	--	--	0.00095 U	0.00089 U	0.00078 U	--	--	0.0010 U	0.00094 U	17.5		
1,1-Dichloroethane	--	--	0.00095 U	0.00089 U	0.00078 U	--	--	0.0010 U	0.00094 U	175		
1,1-Dichloroethene	--	--	0.00095 U	0.00089 U	0.00078 U	--	--	0.0010 U	0.00094 U	4,000		
1,1-Dichloropropene	--	--	0.00095 U	0.00089 U	0.00078 U	--	--	0.0010 U	0.00094 U	NE		
1,2,3-Trichlorobenzene	--	--	0.00095 U	0.00089 U	0.00078 U	--	--	0.065 U	0.00094 U	NE		
1,2,3-Trichloropropane	--	--	0.00095 U	0.00089 U	0.00078 U	--	--	0.065 U	0.00094 U	0.0333		
1,2,4-Trichlorobenzene	--	--	0.00095 U	0.00089 U	0.00078 U	--	--	0.065 U	0.00094 U	34.5		
1,2,4-Trimethylbenzene	--	--	0.00095 U	0.00089 U	0.00078 U	--	--	0.065 U	0.00094 U	NE		
1,2-Dibromo-3-Chloropropane	--	--	0.0048 U	0.0045 U	0.0039 U	--	--	0.32 U	0.0047 U	1.25		
1,2-Dibromoethane	--	--	0.00095 U	0.00089 U	0.00078 U	--	--	0.0010 U	0.00094 U	0.005		
1,2-Dichlorobenzene (o-Dichlorobenzene)	--	--	0.00095 U	0.00089 U	0.00078 U	--	--	0.065 U	0.00094 U	7,200		
1,2-Dichloroethane	--	--	0.00095 U	0.00089 U	0.00078 U	--	--	0.0010 U	0.00094 U	11		
1,2-Dichloropropane	--	--	0.00095 U	0.00089 U	0.00078 U	--	--	0.0010 U	0.00094 U	27.8		
1,3,5-Trimethylbenzene	--	--	0.00095 U	0.00089 U	0.00078 U	--	--	0.065 U	0.00094 U	800		
1,3-Dichlorobenzene (m-Dichlorobenzene)	--	--	0.00095 U	0.00089 U	0.00078 U	--	--	0.065 U	0.00094 U	NE		
1,3-Dichloropropane	--	--	0.00095 U	0.00089 U	0.00078 U	--	--	0.0010 U	0.00094 U	NE		
1,4-Dichlorobenzene (p-Dichlorobenzene)	--	--	0.00095 U	0.00089 U	0.00078 U	--	--	0.065 U	0.00094 U	185		
2,2-Dichloropropane	--	--	0.00095 U	0.00089 U	0.00078 U	--	--	0.0010 U	0.00094 U	NE		

Boring Identification	FL358-MW3					FL358-MW4				MTCA Method A/B Cleanup Level <sup>12</sup>	Naturally Occurring Background Metals in Puget Sound Soils <sup>15</sup>
	Sample Identification <sup>2</sup>	FL358-MW3-0-0.5	FL358-MW3-0.5-1	FL358-MW3-4-5	FL358-MW3-7-8	FL358-MW3-11-12	FL358-MW4-0-0.5	FL358-MW4-0.5-1	FL358-MW4-6.5-7.5		
Sample Date	10/3/2017	10/3/2017	10/3/2017	10/3/2017	10/3/2017	10/3/2017	10/3/2017	10/3/2017	10/3/2017	10/3/2017	
Sample Start Depth (feet bgs)	0.0	0.5	4.0	7.0	11	0.0	0.5	6.5	8.5		
Sample End Depth (feet bgs)	0.5	1.0	5.0	8.0	12	0.5	1.0	7.5	9.5		
2-Butanone (MEK)	--	--	0.0048 U	<b>0.015</b>	<b>0.0078</b>	--	--	<b>0.056</b>	0.0047 U	48,000	
2-Chloroethyl vinyl ether	--	--	0.0048 U	0.0045 U	0.0039 U	--	--	0.0051 U	0.0047 U	NE	
2-Chlorotoluene	--	--	0.00095 U	0.00089 U	0.00078 U	--	--	0.065 U	0.00094 U	1,600	
2-Hexanone	--	--	0.0048 U	0.0045 U	0.0039 U	--	--	0.0051 U	0.0047 U	NE	
4-Chlorotoluene	--	--	0.00095 U	0.00089 U	0.00078 U	--	--	0.065 U	0.00094 U	NE	
4-Methyl-2-Pentanone (Methyl isobutyl ketone)	--	--	0.0048 U	0.0045 U	0.0039 U	--	--	0.0051 U	0.0047 U	6,400	
Acetone <sup>9</sup>	--	--	<b>0.012</b>	<b>0.10</b>	<b>0.044</b>	--	--	<b>0.29</b>	<b>0.029</b>	72,000	
Benzene	--	--	0.00095 U	0.00089 U	0.00078 U	--	--	0.0010 U	0.00094 U	0.03	
Bromobenzene	--	--	0.00095 U	0.00089 U	0.00078 U	--	--	0.065 U	0.00094 U	NE	
Bromochloromethane	--	--	0.00095 U	0.00089 U	0.00078 U	--	--	0.0010 U	0.00094 U	NE	
Bromodichloromethane	--	--	0.00095 U	0.00089 U	0.00078 U	--	--	0.0010 U	0.00094 U	16.1	
Bromoform (Tribromomethane)	--	--	0.0048 U	0.0045 U	0.0039 U	--	--	0.0051 U	0.0047 U	127	
Bromomethane	--	--	0.00095 U	0.00089 U	0.00078 U	--	--	0.0010 U	0.00094 U	112	
Carbon Disulfide	--	--	0.00095 U	0.00089 U	<b>0.0012</b>	--	--	<b>0.0012</b>	0.00094 U	8,000	
Carbon Tetrachloride	--	--	0.00095 U	0.00089 U	0.00078 U	--	--	0.0010 U	0.00094 U	14.3	
Chlorobenzene	--	--	0.00095 U	0.00089 U	0.00078 U	--	--	0.0010 U	0.00094 U	1,600	
Chloroethane	--	--	0.0048 U	0.0045 U	0.0039 U	--	--	0.0051 U	0.0047 U	NE	
Chloroform	--	--	0.00095 U	0.00089 U	0.00078 U	--	--	0.0010 U	0.00094 U	32.3	
Chloromethane	--	--	0.0065 U	0.0061 U	0.0053 U	--	--	0.0069 U	0.0067 U	NE	
cis-1,2-Dichloroethene	--	--	0.00095 U	0.00089 U	0.00078 U	--	--	0.0010 U	0.00094 U	160	
cis-1,3-Dichloropropene	--	--	0.00095 U	0.00089 U	0.00078 U	--	--	0.0010 U	0.00094 U	NE	
Dibromochloromethane	--	--	0.00095 U	0.00089 U	0.00078 U	--	--	0.0010 U	0.00094 U	11.9	
Dibromomethane	--	--	0.00095 U	0.00089 U	0.00078 U	--	--	0.0010 U	0.00094 U	800	
Dichlorodifluoromethane (CFC-12)	--	--	0.0023 U	0.0021 U	0.0019 U	--	--	0.0024 U	0.0025 U	16,000	
Ethylbenzene	--	--	0.00095 U	0.00089 U	0.00078 U	--	--	<b>0.0022</b>	0.00094 U	6	
Hexachlorobutadiene	--	--	0.0048 U	0.0045 U	0.0039 U	--	--	0.32 U	0.0047 U	12.8	
Isopropylbenzene (Cumene)	--	--	0.00095 U	0.00089 U	0.00078 U	--	--	0.0010 U	0.00094 U	8,000	
Methyl Iodide (Iodomethane)	--	--	0.0071 U	0.0066 U	0.0057 U	--	--	0.0075 U	0.0067 U	NE	
Methyl t-butyl ether	--	--	0.00095 U	0.00089 U	0.00078 U	--	--	0.0010 U	0.00094 U	0.1	
Methylene Chloride	--	--	0.0048 U	0.0045 U	0.0039 U	--	--	0.0051 U	0.0047 U	0.02	
Naphthalene	--	--	0.00095 U	0.00089 U	0.00078 U	--	--	0.065 U	0.00094 U	5	
n-Butylbenzene	--	--	0.00095 U	0.00089 U	0.00078 U	--	--	0.065 U	0.00094 U	4,000	
n-Propylbenzene	--	--	0.00095 U	0.00089 U	0.00078 U	--	--	0.065 U	0.00094 U	8,000	
p-Isopropyltoluene	--	--	0.00095 U	<b>0.0014</b>	<b>0.0029</b>	--	--	0.065 U	0.00094 U	NE	
Sec-Butylbenzene	--	--	0.00095 U	0.00089 U	0.00078 U	--	--	0.065 U	0.00094 U	8,000	
Styrene	--	--	0.00095 U	0.00089 U	0.00078 U	--	--	0.0010 U	0.00094 U	16,000	
Tert-Butylbenzene	--	--	0.00095 U	0.00089 U	0.00078 U	--	--	0.065 U	0.00094 U	8,000	
Tetrachloroethene	--	--	0.00095 U	0.00089 U	0.00078 U	--	--	0.0010 U	0.00094 U	0.05	
Toluene	--	--	0.0048 U	0.0045 U	0.0039 U	--	--	0.0051 U	0.0047 U	7	
Trans-1,2-Dichloroethene	--	--	0.00095 U	0.00089 U	0.00078 U	--	--	0.0010 U	0.00094 U	1,600	
Trans-1,3-Dichloropropene	--	--	0.00095 U	0.00089 U	0.00078 U	--	--	0.0010 U	0.00094 U	NE	
Trichloroethene	--	--	0.00095 U	0.00089 U	0.00078 U	--	--	0.0010 U	0.00094 U	0.03	
Trichlorofluoromethane (CFC-11)	--	--	0.00095 U	0.00089 U	0.00078 U	--	--	0.0010 U	0.00094 U	24,000	
Vinyl Acetate	--	--	0.0048 U	0.0045 U	0.0039 U	--	--	0.0051 U	0.0047 U	80,000	

N/A

Boring Identification	FL358-MW3					FL358-MW4				MTCA Method A/B Cleanup Level <sup>12</sup>	Naturally Occurring Background Metals in Puget Sound Soils <sup>15</sup>	
	Sample Identification <sup>2</sup>	FL358-MW3-0-0.5	FL358-MW3-0.5-1	FL358-MW3-4-5	FL358-MW3-7-8	FL358-MW3-11-12	FL358-MW4-0-0.5	FL358-MW4-0.5-1	FL358-MW4-6.5-7.5			FL358-MW4-8.5-9.5
Sample Date	10/3/2017	10/3/2017	10/3/2017	10/3/2017	10/3/2017	10/3/2017	10/3/2017	10/3/2017	10/3/2017	10/3/2017		
Sample Start Depth (feet bgs)	0.0	0.5	4.0	7.0	11	0.0	0.5	6.5	8.5			
Sample End Depth (feet bgs)	0.5	1.0	5.0	8.0	12	0.5	1.0	7.5	9.5			
Vinyl Chloride	--	--	0.00095 U	0.00089 U	0.00078 U	--	--	0.0010 U	0.0012 U	240		
Xylene, m-,p-	--	--	0.0019 U	0.0018 U	0.0016 U	--	--	0.0020 U	0.0019 U	9	N/A	
Xylene, o-	--	--	0.00095 U	0.00089 U	0.00078 U	--	--	0.0010 U	0.00094 U			
Total Xylenes <sup>7</sup>	--	--	0.0019 U	0.0018 U	0.0016 U	--	--	0.0020 U	0.0019 U			
<b>PAHs<sup>10</sup> (mg/kg)</b>												
1-Methylnaphthalene	--	--	--	--	--	--	--	--	--	5	N/A	
2-Methylnaphthalene	--	--	--	--	--	--	--	--	--			
Naphthalene	--	--	--	--	--	--	--	--	--			
Total Naphthalenes <sup>11</sup>	--	--	--	--	--	--	--	--	--			
Acenaphthene	--	--	--	--	--	--	--	--	--	4,800		
Acenaphthylene	--	--	--	--	--	--	--	--	--	NE		
Anthracene	--	--	--	--	--	--	--	--	--	24,000		
Benzo(a)anthracene	--	--	--	--	--	--	--	--	--	See cPAHs		
Benzo(a)pyrene	--	--	--	--	--	--	--	--	--	See cPAHs		
Benzo(b)fluoranthene	--	--	--	--	--	--	--	--	--	See cPAHs		
Benzo(g,h,i)perylene	--	--	--	--	--	--	--	--	--	NE		
Benzo(j,k)fluoranthene	--	--	--	--	--	--	--	--	--	See cPAHs		
Chrysene	--	--	--	--	--	--	--	--	--	See cPAHs		
Dibenzo(a,h)anthracene	--	--	--	--	--	--	--	--	--	See cPAHs		
Fluoranthene	--	--	--	--	--	--	--	--	--	3,200		
Fluorene	--	--	--	--	--	--	--	--	--	3,200		
Indeno(1,2,3-c,d)pyrene	--	--	--	--	--	--	--	--	--	See cPAHs		
Phenanthrene	--	--	--	--	--	--	--	--	--	NE		
Pyrene	--	--	--	--	--	--	--	--	--	2,400		
cPAHs (benzo(a)pyrene toxicity equivalent concentration) <sup>14</sup>	--	--	--	--	--	--	--	--	--	0.1		

**Notes:**

<sup>1</sup> Chemical analysis performed by OnSite Environmental, Inc., of Redmond, Washington.

<sup>2</sup> Sample ID = Parcel ID - boring number - depth of sample [feet bgs]. FL358-B1-0.5-1 = Boring 1 from Parcel FL358, collected from a depth of 0.5 to 1 feet bgs.

<sup>3</sup> Gasoline-range petroleum hydrocarbons by Northwest Method NWTPH-Gx.

<sup>4</sup> Diesel- and lube oil-range petroleum hydrocarbons by Northwest Method NWTPH-Dx.

<sup>5</sup> Resource Conservation Recovery Act (RCRA) metals analyzed by EPA 6000/7000 series method.

<sup>6</sup> Benzene, toluene, ethylbenzene, xylenes (BTEX) by United States Environmental Protection Agency (EPA) Method 8021B.

<sup>7</sup> Total xylenes consists of m,p- and o- xylenes. The higher detection limit is used for non-detects.

<sup>8</sup> Volatile organic compounds (VOCs) analyzed by United States Environmental Protection Agency (EPA) Method 8260C.

<sup>9</sup> Acetone is a common laboratory contaminant.

<sup>10</sup> Polycyclic aromatic hydrocarbons (PAHs) and carcinogenic PAHs (cPAHs) analyzed by EPA Method 8270D/SIM.

<sup>11</sup> Total naphthalenes consists of 1-methylnaphthalene, 2-methylnaphthalene and naphthalene.

<sup>12</sup> MTCA Method B cleanup level used when Method A cleanup level has not been established.

<sup>13</sup> Model Toxics Control Act (MTCA) Method A cleanup level for gasoline is 30 mg/kg if benzene is detected or if the sum of toluene, ethylbenzene and xylenes are greater than or equal to 1% of the total gasoline detection.

<sup>14</sup> Results for cPAHs are shown as the sum of the benzo[a]pyrene toxicity equivalent concentrations, calculated by multiplying each individual cPAH concentration by its corresponding TEF. In this sum, non-detects are represented as 1/2 of the corresponding analyte reporting limit multiplied by the TEF.

<sup>15</sup> 90th Percentile for natural background soil metals concentrations in Puget Sound region, Department of Ecology, publication #94-115, dated October 1994.

"-" = not tested

bgs = below ground surface

mg/kg = milligrams per kilogram

NE = not established

MTCA = Model Toxics Control Act

N/A = not applicable

U = Analyte was not detected at or greater than the listed reporting limit.

TEF = Toxicity Equivalency Factor as defined in WAC 173-340-900 Table 708-2.

**Bold** font type indicates that the analyte was detected at a concentration greater than the respective laboratory reporting limit.

**Grey shading** indicates that the detected result exceeds the specified MTCA Cleanup Level.

**Table 2**  
**Summary of Groundwater Chemical Analytical Results<sup>1</sup> - Y Pay Mor Dry Cleaner Explorations**  
 Sound Transit - Federal Way Link Extension FL358/FL361/FL363  
 Federal Way, Washington

Well Identification	FL358-MW1	FL358-MW2	FL358-MW3		FL358-MW4	Y Pay Mor-MW3	MTCA Method A/B Cleanup Level <sup>10</sup>
Sample Identification <sup>2</sup>	FL358-MW1-20171006	FL358-MW2-20171006	FL358-MW3-20171009	DUP-20171009	FL358-MW4-20171006	FL358-YPAYMOR MW3-20171003	
Sample Date	10/6/2017	10/6/2017	10/9/2017	10/9/2017	10/6/2017	10/3/2017	
<b>NWTPH-Gx<sup>3</sup> (ug/L)</b>							
Gasoline-range hydrocarbons	--	--	--	--	--	--	800/1,000 <sup>11</sup>
<b>NWTPH-Dx<sup>4</sup> (mg/L)</b>							
Diesel-range hydrocarbons	--	--	--	--	--	--	0.5
Lube Oil-range hydrocarbons	--	--	--	--	--	--	0.5
<b>Metals<sup>5</sup> (ug/L)</b>							
Lead	--	--	--	--	--	--	15
<b>VOCs<sup>6</sup> (ug/L)</b>							
1,1,1,2-Tetrachloroethane	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	1.68
1,1,1-Trichloroethane	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	200
1,1,2,2-Tetrachloroethane	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.26 U	0.219
1,1,2-Trichloroethane	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.768
1,1-Dichloroethane	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	7.68
1,1-Dichloroethene	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	400
1,1-Dichloropropene	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	NE
1,2,3-Trichlorobenzene	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	NE
1,2,3-Trichloropropane	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.00146
1,2,4-Trichlorobenzene	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	1.51
1,2,4-Trimethylbenzene	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	NE
1,2-Dibromo-3-Chloropropane	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.3 U	0.0547
1,2-Dibromoethane	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.01
1,2-Dichlorobenzene (o-Dichlorobenzene)	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	720
1,2-Dichloroethane	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	5
1,2-Dichloropropane	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	1.22
1,3,5-Trimethylbenzene	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	80
1,3-Dichlorobenzene (m-Dichlorobenzene)	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	NE
1,3-Dichloropropane	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	NE
1,4-Dichlorobenzene (p-Dichlorobenzene)	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	8.10
2,2-Dichloropropane	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	NE
2-Butanone (MEK)	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	4,800
2-Chloroethyl vinyl ether	4.5 U	4.5 U	10 U	10 U	4.5 U	3.7 U	NE
2-Chlorotoluene	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	160
2-Hexanone	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.6 U	NE
4-Chlorotoluene	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	NE
4-Methyl-2-Pentanone (Methyl isobutyl ketone)	2.0 U	2.0 U	2.5 U	2.5 U	2.0 U	2.6 U	640
Acetone	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	7,200
Benzene	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	5
Bromobenzene	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	NE
Bromochloromethane	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	NE
Bromodichloromethane	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.706
Bromoform (Tribromomethane)	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.54

Well Identification	FL358-MW1	FL358-MW2	FL358-MW3		FL358-MW4	Y Pay Mor-MW3	MTCA Method A/B Cleanup Level <sup>10</sup>
Sample Identification <sup>2</sup>	FL358-MW1-20171006	FL358-MW2-20171006	FL358-MW3-20171009	DUP-20171009	FL358-MW4-20171006	FL358-YPAYMOR MW3-20171003	
Sample Date	10/6/2017	10/6/2017	10/9/2017	10/9/2017	10/6/2017	10/3/2017	
Bromomethane	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	11.2
Carbon Disulfide	0.20 U	0.20 U	0.27 U	0.27 U	0.20 U	0.20 U	800
Carbon Tetrachloride	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.625
Chlorobenzene	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	160
Chloroethane	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	NE
Chloroform	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	1.41
Chloromethane	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	NE
cis-1,2-Dichloroethene	<b>0.61</b>	0.20 U	0.20 U	0.20 U	<b>0.34</b>	<b>0.20</b>	16
cis-1,3-Dichloropropene	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	NE
Dibromochloromethane	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.521
Dibromomethane	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	80
Dichlorodifluoromethane (CFC-12)	0.39 U	0.39 U	0.20 U	0.20 U	0.39 U	0.20 U	1,600
Ethylbenzene	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	700
Hexachlorobutadiene	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.561
Isopropylbenzene (Cumene)	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	800
Methyl Iodide (Iodomethane)	1.4 U	1.4 U	2.0 U	2.0 U	1.4 U	1.5 U	NE
Methyl t-butyl ether	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	20
Methylene Chloride	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5
Naphthalene	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.4 U	160
n-Butylbenzene	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	400
n-Propylbenzene	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	800
p-Isopropyltoluene	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	NE
Sec-Butylbenzene	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	800
Styrene	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	1,600
Tert-Butylbenzene	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	800
Tetrachloroethene	<b>0.21</b>	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	5
Toluene	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1,000
Trans-1,2-Dichloroethene	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	160
Trans-1,3-Dichloropropene	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	NE
Trichloroethene	<b>1.0</b>	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	5
Trichlorofluoromethane (CFC-11)	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	2,400
Vinyl Acetate	1.0 U	1.0 U	1.3 U	1.3 U	1.0 U	1.3 U	8,000
Vinyl Chloride	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.2
Xylene, m-,p-	0.40 U	0.40 U	0.40 U	0.40 U	0.40 U	0.40 U	1,000
Xylene, o-	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	
Total Xylenes <sup>7</sup>	0.40 U	0.40 U	0.40 U	0.40 U	0.40 U	0.40 U	
<b>PAHs<sup>8</sup> (ug/L)</b>							
1-Methylnaphthalene	--	--	--	--	--	--	160
2-Methylnaphthalene	--	--	--	--	--	--	
Naphthalene	--	--	--	--	--	--	
Total Naphthalenes <sup>9</sup>	--	--	--	--	--	--	
Acenaphthene	--	--	--	--	--	--	960
Acenaphthylene	--	--	--	--	--	--	NE
Anthracene	--	--	--	--	--	--	4,800
Benzo(a)anthracene	--	--	--	--	--	--	See cPAHs
Benzo(a)pyrene	--	--	--	--	--	--	See cPAHs
Benzo(b)fluoranthene	--	--	--	--	--	--	See cPAHs
Benzo(g,h,i)perylene	--	--	--	--	--	--	NE
Benzo(j,k)fluoranthene	--	--	--	--	--	--	See cPAHs
Chrysene	--	--	--	--	--	--	See cPAHs

Well Identification	FL358-MW1	FL358-MW2	FL358-MW3		FL358-MW4	Y Pay Mor-MW3	MTCA Method A/B Cleanup Level <sup>10</sup>
Sample Identification <sup>2</sup>	FL358-MW1-20171006	FL358-MW2-20171006	FL358-MW3-20171009	DUP-20171009	FL358-MW4-20171006	FL358-YPAYMOR MW3-20171003	
Sample Date	10/6/2017	10/6/2017	10/9/2017	10/9/2017	10/6/2017	10/3/2017	
Dibenzo(a,h)anthracene	--	--	--	--	--	--	See cPAHs
Fluoranthene	--	--	--	--	--	--	640
Fluorene	--	--	--	--	--	--	640
Indeno(1,2,3-c,d)pyrene	--	--	--	--	--	--	See cPAHs
Phenanthrene	--	--	--	--	--	--	NE
Pyrene	--	--	--	--	--	--	480
cPAHs (benzo(a)pyrene toxicity equivalent concentration) <sup>12</sup>	--	--	--	--	--	--	0.1

**Notes:**

<sup>1</sup> Chemical analysis performed by OnSite Environmental, Inc., of Redmond, Washington.

<sup>2</sup> Sample ID = Parcel ID - boring number - collection date. FL358-MW1-20171006 = MW 1 from Parcel FL358, collected on 10/6/2017.

<sup>3</sup> Gasoline-range petroleum hydrocarbons by Northwest Method NWTPH-Gx.

<sup>4</sup> Diesel- and lube oil-range petroleum hydrocarbons by Northwest Method NWTPH-Dx.

<sup>5</sup> Resource Conservation Recovery Act (RCRA) metals analyzed by United States Environmental Protection Agency (EPA) Method 200.8.

<sup>6</sup> Volatile organic compounds (VOCs) analyzed by United States Environmental Protection Agency (EPA) Method 8260C.

<sup>7</sup> Total xylenes consists of m,p- and o- xylenes. The higher detection limit is used for non-detects.

<sup>8</sup> Polycyclic aromatic hydrocarbons (PAHs) and carcinogenic PAHs (cPAHs) analyzed by EPA Method 8270D/SIM.

<sup>9</sup> Total naphthalenes consists of 1-methylnaphthalene, 2-methylnaphthalene and naphthalene.

<sup>10</sup> MTCA Method B cleanup level used when Method A cleanup level has not been established.

<sup>11</sup> Model Toxics Control Act (MTCA) Method A cleanup level for gasoline is 800 µg/L if benzene is detected.

<sup>12</sup> Results for cPAHs are shown as the sum of the benzo[a]pyrene toxicity equivalent concentrations, calculated by multiplying each individual cPAH concentration by its corresponding TEF. In this sum, non-detects are represented as ½ of the corresponding analyte reporting limit multiplied by the TEF.

U = Analyte was not detected at or greater than the listed reporting limit.

TEF = Toxicity Equivalency Factor as defined in WAC 173-340-900 Table 708-2.

**Bold** font type indicates that the analyte was detected at a concentration greater than the respective laboratory reporting limit.

Grey shading indicates that the detected result exceeds the specified MTCA Cleanup Level.

"-" = not tested

mg/L = milligrams per liter

µg/L = micrograms per liter

NE = not established

MTCA = Model Toxics Control Act



Boring Identification	FL363-B4						FL363-B5						MTCA Method A/B Cleanup Level <sup>12</sup>	Naturally Occurring Background Metals in Puget Sound Soils <sup>15</sup>
	Sample Identification <sup>2</sup>	FL363-B4-0-0.5	FL363-B4-0.5-1	FL363-B4-7-8	FL363-B4-11-12	FL363-B4-12-13	FL363-B4-17-18	FL363-B5-0-0.5	FL363-B5-0.5-1	FL363-B5-5.5-6.5	FL363-B5-11.5-12.5	FL363-B5-17-18		
Sample Date	10/4/2017	10/4/2017	10/4/2017	10/4/2017	10/4/2017	10/4/2017	10/4/2017	10/4/2017	10/4/2017	10/4/2017	10/4/2017	10/4/2017		
Sample Start Depth (feet bgs)	0.0	0.5	7.0	11	12	17	0.0	0.5	5.5	11.5	17			
Sample End Depth (feet bgs)	0.5	1.0	8.0	12	13	18	0.5	1.0	6.5	12.5	18			
2-Butanone (MEK)	--	--	<b>0.058</b>	0.29 U	0.23 U	0.0048 U	--	--	<b>0.015</b>	0.30 U	<b>0.0070</b>	48,000		
2-Chloroethyl vinyl ether	--	--	0.0080 U	0.29 U	0.23 U	0.0048 U	--	--	0.0061 U	0.30 U	0.0051 U	NE		
2-Chlorotoluene	--	--	0.0016 U	0.058 U	0.046 U	0.00097 U	--	--	0.0012 U	0.061 U	0.0010 U	1,600		
2-Hexanone	--	--	0.0080 U	0.29 U	0.23 U	0.0048 U	--	--	0.0061 U	0.30 U	0.0051 U	NE		
4-Chlorotoluene	--	--	0.0016 U	0.058 U	0.046 U	0.00097 U	--	--	0.0012 U	0.061 U	0.0010 U	NE		
4-Methyl-2-Pentanone (Methyl isobutyl ketone)	--	--	0.0080 U	0.29 U	0.23 U	0.0048 U	--	--	0.0061 U	0.30 U	0.0051 U	6,400		
Acetone <sup>9</sup>	--	--	<b>0.25</b>	0.29 U	0.23 U	<b>0.028</b>	--	--	<b>0.21</b>	0.30 U	<b>0.065</b>	72,000		
Benzene	--	--	<b>0.0035</b>	0.058 U	0.046 U	0.00097 U	--	--	0.0012 U	0.061 U	<b>0.012</b>	0.03		
Bromobenzene	--	--	0.0016 U	0.058 U	0.046 U	0.00097 U	--	--	0.0012 U	0.061 U	0.0010 U	NE		
Bromochloromethane	--	--	0.0016 U	0.058 U	0.046 U	0.00097 U	--	--	0.0012 U	0.061 U	0.0010 U	NE		
Bromodichloromethane	--	--	0.0016 U	0.058 U	0.046 U	0.00097 U	--	--	0.0012 U	0.061 U	0.0010 U	16.1		
Bromoform (Tribromomethane)	--	--	0.0080 U	0.29 U	0.23 U	0.0048 U	--	--	0.0061 U	0.30 U	0.0051 U	127		
Bromomethane	--	--	0.0016 U	0.058 U	0.046 U	0.00097 U	--	--	0.0012 U	0.061 U	0.0010 U	112		
Carbon Disulfide	--	--	0.0016 U	0.058 U	0.046 U	0.00097 U	--	--	0.0012 U	0.061 U	0.0010 U	8,000		
Carbon Tetrachloride	--	--	0.0016 U	0.058 U	0.046 U	0.00097 U	--	--	0.0012 U	0.061 U	0.0010 U	14.3		
Chlorobenzene	--	--	0.0016 U	0.058 U	0.046 U	0.00097 U	--	--	0.0012 U	0.061 U	0.0010 U	1,600		
Chloroethane	--	--	0.0080 U	0.29 U	0.23 U	0.0048 U	--	--	0.0061 U	0.30 U	0.0051 U	NE		
Chloroform	--	--	0.0016 U	0.058 U	0.046 U	0.00097 U	--	--	0.0012 U	0.061 U	0.0010 U	32.3		
Chloromethane	--	--	0.0080 U	0.29 U	0.23 U	0.0063 U	--	--	0.0079 U	0.30 U	0.0051 U	NE		
cis-1,2-Dichloroethene	--	--	0.0016 U	0.058 U	0.046 U	0.00097 U	--	--	0.0012 U	0.061 U	0.0010 U	160		
cis-1,3-Dichloropropene	--	--	0.0016 U	0.058 U	0.046 U	0.00097 U	--	--	0.0012 U	0.061 U	0.0010 U	NE		
Dibromochloromethane	--	--	0.0016 U	0.058 U	0.046 U	0.00097 U	--	--	0.0012 U	0.061 U	0.0010 U	11.9		
Dibromomethane	--	--	0.0016 U	0.058 U	0.046 U	0.00097 U	--	--	0.0012 U	0.061 U	0.0010 U	800		
Dichlorodifluoromethane (CFC-12)	--	--	0.0029 U	0.10 U	0.082 U	0.0021 U	--	--	0.0027 U	0.11 U	0.0018 U	16,000		
Ethylbenzene	--	--	0.0016 U	0.058 U	<b>3.7</b>	<b>0.0046</b>	--	--	<b>0.0027</b>	<b>11</b>	<b>0.011</b>	6		
Hexachlorobutadiene	--	--	0.0080 U	0.29 U	0.23 U	0.0048 U	--	--	0.0061 U	0.30 U	0.0051 U	12.8		
Isopropylbenzene (Cumene)	--	--	<b>0.021</b>	0.058 U	<b>0.98</b>	<b>0.0011</b>	--	--	0.0012 U	<b>1.5</b>	<b>0.0014</b>	8,000		
Methyl Iodide (Iodomethane)	--	--	0.0080 U	0.29 U	0.23 U	0.0067 U	--	--	0.0084 U	0.30 U	0.0051 U	NE		
Methyl t-butyl ether	--	--	0.0016 U	0.058 U	0.046 U	0.00097 U	--	--	0.0012 U	0.061 U	0.0010 U	0.1		
Methylene Chloride	--	--	0.016 U	0.58 U	0.46 U	0.0097 U	--	--	0.012 U	0.61 U	0.010 U	0.02		
Naphthalene	--	--	<b>0.0030</b>	0.058 U	<b>4.3</b>	<b>0.0078</b>	--	--	0.0012 U	<b>3.5</b>	0.0010 U	5		
n-Butylbenzene	--	--	<b>0.027</b>	0.058 U	<b>6.8</b>	<b>0.0028</b>	--	--	0.0012 U	<b>3.2</b>	<b>0.0017</b>	4,000		
n-Propylbenzene	--	--	<b>0.076</b>	0.058 U	<b>5.1</b>	<b>0.0067</b>	--	--	0.0012 U	<b>6.2</b>	<b>0.0039</b>	8,000		
p-Isopropyltoluene	--	--	<b>0.021</b>	0.058 U	<b>0.63</b>	0.00097 U	--	--	0.0012 U	<b>0.23</b>	0.0010 U	NE		
Sec-Butylbenzene	--	--	<b>0.033</b>	0.058 U	<b>1.1</b>	0.00097 U	--	--	0.0012 U	<b>0.86</b>	0.0010 U	8,000		
Styrene	--	--	0.0016 U	0.058 U	0.046 U	0.00097 U	--	--	0.0012 U	0.061 U	0.0010 U	16,000		
Tert-Butylbenzene	--	--	0.0016 U	0.058 U	0.046 U	0.00097 U	--	--	0.0012 U	0.061 U	0.0010 U	8,000		
Tetrachloroethene	--	--	0.0016 U	0.058 U	0.046 U	0.00097 U	--	--	0.0012 U	0.061 U	0.0010 U	0.05		
Toluene	--	--	0.0080 U	0.29 U	0.23 U	0.0048 U	--	--	0.0061 U	0.30 U	<b>0.018</b>	7		
Trans-1,2-Dichloroethene	--	--	0.0016 U	0.058 U	0.046 U	0.00097 U	--	--	0.0012 U	0.061 U	0.0010 U	1,600		
Trans-1,3-Dichloropropene	--	--	0.0016 U	0.058 U	0.046 U	0.00097 U	--	--	0.0012 U	0.061 U	0.0010 U	NE		
Trichloroethene	--	--	0.0016 U	0.058 U	0.046 U	0.00097 U	--	--	0.0012 U	0.061 U	0.0010 U	0.03		
Trichlorofluoromethane (CFC-11)	--	--	0.0016 U	0.058 U	0.046 U	0.00097 U	--	--	0.0012 U	0.061 U	0.0010 U	24,000		
Vinyl Acetate	--	--	0.0080 U	0.29 U	0.23 U	0.0048 U	--	--	0.0061 U	0.30 U	0.0051 U	80,000		

N/A

Boring Identification	FL363-B4						FL363-B5						MTCA Method A/B Cleanup Level <sup>12</sup>	Naturally Occurring Background Metals in Puget Sound Soils <sup>15</sup>
	Sample Identification <sup>2</sup>	FL363-B4-0-0.5	FL363-B4-0.5-1	FL363-B4-7-8	FL363-B4-11-12	FL363-B4-12-13	FL363-B4-17-18	FL363-B5-0-0.5	FL363-B5-0.5-1	FL363-B5-5.5-6.5	FL363-B5-11.5-12.5	FL363-B5-17-18		
Sample Date	10/4/2017	10/4/2017	10/4/2017	10/4/2017	10/4/2017	10/4/2017	10/4/2017	10/4/2017	10/4/2017	10/4/2017	10/4/2017	10/4/2017		
Sample Start Depth (feet bgs)	0.0	0.5	7.0	11	12	17	0.0	0.5	5.5	11.5	17			
Sample End Depth (feet bgs)	0.5	1.0	8.0	12	13	18	0.5	1.0	6.5	12.5	18			
Vinyl Chloride	--	--	0.0016 U	0.058 U	0.046 U	0.00097 U	--	--	0.0012 U	0.061 U	0.0010 U	240		
Xylene, m-,p-	--	--	<b>0.049</b>	0.12 U	<b>20</b>	<b>0.011</b>	--	--	<b>0.012</b>	<b>0.80</b>	<b>0.013</b>	9	N/A	
Xylene, o-	--	--	<b>0.0017</b>	0.058 U	<b>2.8</b>	<b>0.0022</b>	--	--	<b>0.0037</b>	<b>0.069</b>	<b>0.0040</b>			
Total Xylenes <sup>7</sup>	--	--	<b>0.0507</b>	0.12 U	<b>22.8</b>	<b>0.0132</b>	--	--	<b>0.0157</b>	<b>0.869</b>	<b>0.0170</b>			
<b>PAHs<sup>10</sup> (mg/kg)</b>														
1-Methylnaphthalene	--	--	<b>0.010</b>	<b>0.51</b>	<b>0.45</b>	<b>0.012</b>	--	--	0.0073 U	<b>0.55</b>	0.0073 U	5		
2-Methylnaphthalene	--	--	<b>0.016</b>	<b>1.1</b>	<b>0.81</b>	<b>0.022</b>	--	--	0.0073 U	<b>1.0</b>	0.0073 U			
Naphthalene	--	--	<b>0.065</b>	<b>0.79</b>	<b>1.1</b>	<b>0.033</b>	--	--	<b>0.029</b>	<b>1.3</b>	0.0073 U			
Total Naphthalenes <sup>11</sup>	--	--	<b>0.091</b>	<b>2.4</b>	<b>2.36</b>	<b>0.067</b>	--	--	<b>0.029</b>	<b>2.85</b>	0.0073 U			
Acenaphthene	--	--	0.0092 U	0.0078 U	0.0075 U	0.0082 U	--	--	0.0073 U	0.0080 U	0.0073 U	4,800		
Acenaphthylene	--	--	0.0092 U	0.0078 U	0.0075 U	0.0082 U	--	--	0.0073 U	0.0080 U	0.0073 U	NE		
Anthracene	--	--	0.0092 U	0.0078 U	0.0075 U	0.0082 U	--	--	0.0073 U	0.0080 U	0.0073 U	24,000		
Benzo(a)anthracene	--	--	0.0092 U	0.0078 U	0.0075 U	0.0082 U	--	--	0.0073 U	0.0080 U	0.0073 U	See cPAHs		
Benzo(a)pyrene	--	--	0.0092 U	0.0078 U	0.0075 U	0.0082 U	--	--	0.0073 U	0.0080 U	0.0073 U	See cPAHs		
Benzo(b)fluoranthene	--	--	0.0092 U	0.0078 U	0.0075 U	0.0082 U	--	--	0.0073 U	0.0080 U	0.0073 U	See cPAHs		
Benzo(g,h,i)perylene	--	--	0.0092 U	0.0078 U	0.0075 U	0.0082 U	--	--	0.0073 U	0.0080 U	0.0073 U	NE		
Benzo(j,k)fluoranthene	--	--	0.0092 U	0.0078 U	0.0075 U	0.0082 U	--	--	0.0073 U	0.0080 U	0.0073 U	See cPAHs		
Chrysene	--	--	0.0092 U	0.0078 U	0.0075 U	0.0082 U	--	--	0.0073 U	0.0080 U	0.0073 U	See cPAHs		
Dibenzo(a,h)anthracene	--	--	0.0092 U	0.0078 U	0.0075 U	0.0082 U	--	--	0.0073 U	0.0080 U	0.0073 U	See cPAHs		
Fluoranthene	--	--	<b>0.010</b>	0.0078 U	0.0075 U	0.0082 U	--	--	0.0073 U	0.0080 U	0.0073 U	3,200		
Fluorene	--	--	0.0092 U	<b>0.0084</b>	0.0075 U	0.0082 U	--	--	0.0073 U	0.0080 U	0.0073 U	3,200		
Indeno(1,2,3-c,d)pyrene	--	--	0.0092 U	0.0078 U	0.0075 U	0.0082 U	--	--	0.0073 U	0.0080 U	0.0073 U	See cPAHs		
Phenanthrene	--	--	<b>0.015</b>	<b>0.011</b>	0.0075 U	0.0082 U	--	--	0.0073 U	0.0080 U	0.0073 U	NE		
Pyrene	--	--	0.0092 U	0.0078 U	0.0075 U	0.0082 U	--	--	0.0073 U	0.0080 U	0.0073 U	2,400		
cPAHs (benzo(a)pyrene toxicity equivalent concentration) <sup>14</sup>	--	--	0.0069 U	0.0059 U	0.0057 U	0.0062 U	--	--	0.0055 U	0.006 U	0.0055 U	0.1		

Boring Identification	FL363-B6			FL363-B7					MTCA Method A/B Cleanup Level <sup>12</sup>	Naturally Occurring Background Metals in Puget Sound Soils <sup>15</sup>
	Sample Identification <sup>2</sup>	FL363-B6-6-7	FL363-B6-11-12	FL363-B6-17-18	FL363-B7-0-0.5	FL363-B7-0.5-1	FL363-B7-6-7	FL363-B7-10-11		
Sample Date	10/4/2017	10/4/2017	10/4/2017	10/4/2017	10/4/2017	10/4/2017	10/4/2017	10/4/2017	10/4/2017	
Sample Start Depth (feet bgs)	6.0	11	17	0.0	0.5	6.0	10	17		
Sample End Depth (feet bgs)	7.0	12	18	0.5	1.0	7.0	11	18		
<b>NWTPH-Gx<sup>3</sup> (mg/kg)</b>										
Gasoline-range hydrocarbons	7.5 U	8.6 U	5.5 U	--	--	5.3 U	5.4 U	4.9 U	30/100 <sup>13</sup>	N/A
<b>NWTPH-Dx<sup>4</sup> (mg/kg)</b>										
Diesel-range hydrocarbons	28 U	36 U	29 U	--	--	28 U	29 U	28 U	2,000	N/A
Lube Oil-range hydrocarbons	<b>63</b>	<b>100</b>	57 U	--	--	56 U	58 U	57 U	2,000	
<b>Metals<sup>5</sup> (mg/kg)</b>										
Arsenic	--	--	--	5.6 U	5.6 U	--	--	--	20	7
Lead	5.5 U	<b>23</b>	5.7 U	5.6 U	5.6 U	5.6 U	5.8 U	5.7 U	250	24
<b>BTEX<sup>6</sup> (mg/kg)</b>										
Benzene	--	--	0.020 U	--	--	--	--	--	0.03	N/A
Ethylbenzene	--	--	0.055 U	--	--	--	--	--	7	
Toluene	--	--	0.055 U	--	--	--	--	--	6	
Xylene, m-,p-	--	--	0.055 U	--	--	--	--	--	9	
Xylene, o-	--	--	0.055 U	--	--	--	--	--		
Total Xylenes <sup>7</sup>	--	--	0.055 U	--	--	--	--	--		
<b>VOCs<sup>8</sup> (mg/kg)</b>										
1,1,1,2-Tetrachloroethane	0.0012 U	0.0025 U	0.0011 U	--	--	0.0010 U	0.00079 U	0.0010 U	38.5	N/A
1,1,1-Trichloroethane	0.0012 U	0.0025 U	0.0011 U	--	--	0.0010 U	0.00079 U	0.0010 U	2	
1,1,2,2-Tetrachloroethane	0.061 U	0.097 U	0.0011 U	--	--	0.0010 U	0.00079 U	0.0010 U	5	
1,1,2-Trichloroethane	0.0012 U	0.0025 U	0.0011 U	--	--	0.0010 U	0.00079 U	0.0010 U	17.5	
1,1-Dichloroethane	0.0012 U	0.0025 U	0.0011 U	--	--	0.0010 U	0.00079 U	0.0010 U	175	
1,1-Dichloroethene	0.0012 U	0.0025 U	0.0011 U	--	--	0.0010 U	0.00079 U	0.0010 U	4,000	
1,1-Dichloropropene	0.0012 U	0.0025 U	0.0011 U	--	--	0.0010 U	0.00079 U	0.0010 U	NE	
1,2,3-Trichlorobenzene	0.061 U	0.097 U	0.0011 U	--	--	0.0010 U	0.00079 U	0.0010 U	NE	
1,2,3-Trichloropropane	0.061 U	0.097 U	0.0011 U	--	--	0.0010 U	0.00079 U	0.0010 U	0.0333	
1,2,4-Trichlorobenzene	0.061 U	0.097 U	0.0011 U	--	--	0.0010 U	0.00079 U	0.0010 U	34.5	
1,2,4-Trimethylbenzene	0.061 U	0.097 U	0.0011 U	--	--	<b>0.0041</b>	<b>0.0020</b>	0.0010 U	NE	
1,2-Dibromo-3-Chloropropane	0.31 U	0.49 U	0.0056 U	--	--	0.0052 U	0.0039 U	0.0051 U	1.25	
1,2-Dibromoethane	0.0012 U	0.0025 U	0.0011 U	--	--	0.0010 U	0.00079 U	0.0010 U	0.005	
1,2-Dichlorobenzene (o-Dichlorobenzene)	0.061 U	0.097 U	0.0011 U	--	--	0.0010 U	0.00079 U	0.0010 U	7,200	
1,2-Dichloroethane	0.0012 U	0.0025 U	0.0011 U	--	--	0.0010 U	0.00079 U	0.0010 U	11	
1,2-Dichloropropane	0.0012 U	0.0025 U	0.0011 U	--	--	0.0010 U	0.00079 U	0.0010 U	27.8	
1,3,5-Trimethylbenzene	0.061 U	0.097 U	0.0011 U	--	--	<b>0.0017</b>	<b>0.0012</b>	0.0010 U	800	
1,3-Dichlorobenzene (m-Dichlorobenzene)	0.061 U	0.097 U	0.0011 U	--	--	0.0010 U	0.00079 U	0.0010 U	NE	
1,3-Dichloropropane	0.0012 U	0.0025 U	0.0011 U	--	--	0.0010 U	0.00079 U	0.0010 U	NE	
1,4-Dichlorobenzene (p-Dichlorobenzene)	0.061 U	0.097 U	0.0011 U	--	--	0.0010 U	0.00079 U	0.0010 U	185	
2,2-Dichloropropane	0.0012 U	0.0025 U	0.0011 U	--	--	0.0010 U	0.00079 U	0.0010 U	NE	

Boring Identification	FL363-B6			FL363-B7					MTCA Method A/B Cleanup Level <sup>12</sup>	Naturally Occurring Background Metals in Puget Sound Soils <sup>15</sup>
	Sample Identification <sup>2</sup>	FL363-B6-6-7	FL363-B6-11-12	FL363-B6-17-18	FL363-B7-0-0.5	FL363-B7-0.5-1	FL363-B7-6-7	FL363-B7-10-11		
Sample Date	10/4/2017	10/4/2017	10/4/2017	10/4/2017	10/4/2017	10/4/2017	10/4/2017	10/4/2017	10/4/2017	
Sample Start Depth (feet bgs)	6.0	11	17	0.0	0.5	6.0	10	17		
Sample End Depth (feet bgs)	7.0	12	18	0.5	1.0	7.0	11	18		
2-Butanone (MEK)	0.023	0.13	0.0056 U	--	--	0.0072	0.0043	0.0051 U	48,000	
2-Chloroethyl vinyl ether	0.0059 U	0.012 U	0.0056 U	--	--	0.0052 U	0.0039 U	0.0051 U	NE	
2-Chlorotoluene	0.061 U	0.097 U	0.0011 U	--	--	0.0010 U	0.00079 U	0.0010 U	1,600	
2-Hexanone	0.0059 U	0.012 U	0.0056 U	--	--	0.0052 U	0.0039 U	0.0051 U	NE	
4-Chlorotoluene	0.061 U	0.097 U	0.0011 U	--	--	0.0010 U	0.00079 U	0.0010 U	NE	
4-Methyl-2-Pentanone (Methyl isobutyl ketone)	0.0059 U	0.012 U	0.0056 U	--	--	0.0052 U	0.0039 U	0.0051 U	6,400	
Acetone <sup>9</sup>	0.23	0.56	0.0056 U	--	--	0.091	0.047	0.0051 U	72,000	
Benzene	0.020	0.0025	0.0011 U	--	--	0.0010 U	0.00089	0.0010 U	0.03	
Bromobenzene	0.061 U	0.097 U	0.0011 U	--	--	0.0010 U	0.00079 U	0.0010 U	NE	
Bromochloromethane	0.0012 U	0.0025 U	0.0011 U	--	--	0.0010 U	0.00079 U	0.0010 U	NE	
Bromodichloromethane	0.0012 U	0.0025 U	0.0011 U	--	--	0.0010 U	0.00079 U	0.0010 U	16.1	
Bromoform (Tribromomethane)	0.0059 U	0.012 U	0.0056 U	--	--	0.0052 U	0.0039 U	0.0051 U	127	
Bromomethane	0.0012 U	0.0025 U	0.0011 U	--	--	0.0010 U	0.00079 U	0.0010 U	112	
Carbon Disulfide	0.0026	0.0025 U	0.0011 U	--	--	0.0010 U	0.00079 U	0.0010 U	8,000	
Carbon Tetrachloride	0.0012 U	0.0025 U	0.0011 U	--	--	0.0010 U	0.00079 U	0.0010 U	14.3	
Chlorobenzene	0.0012 U	0.0025 U	0.0011 U	--	--	0.0010 U	0.00079 U	0.0010 U	1,600	
Chloroethane	0.0059 U	0.012 U	0.0056 U	--	--	0.0052 U	0.0039 U	0.0051 U	NE	
Chloroform	0.0012 U	0.0025 U	0.0011 U	--	--	0.0010 U	0.00079 U	0.0010 U	32.3	
Chloromethane	0.0059 U	0.012 U	0.0056 U	--	--	0.0052 U	0.0039 U	0.0051 U	NE	
cis-1,2-Dichloroethene	0.0012 U	0.0025 U	0.0011 U	--	--	0.0010 U	0.00079 U	0.0010 U	160	
cis-1,3-Dichloropropene	0.0012 U	0.0025 U	0.0011 U	--	--	0.0010 U	0.00079 U	0.0010 U	NE	
Dibromochloromethane	0.0012 U	0.0025 U	0.0011 U	--	--	0.0010 U	0.00079 U	0.0010 U	11.9	
Dibromomethane	0.0012 U	0.0025 U	0.0011 U	--	--	0.0010 U	0.00079 U	0.0010 U	800	
Dichlorodifluoromethane (CFC-12)	0.0021 U	0.0044 U	0.0020 U	--	--	0.0019 U	0.0014 U	0.0018 U	16,000	
Ethylbenzene	0.0014	0.0025 U	0.0011 U	--	--	0.0016	0.0013	0.0010 U	6	
Hexachlorobutadiene	0.31 U	0.49 U	0.0056 U	--	--	0.0052 U	0.0039 U	0.0051 U	12.8	
Isopropylbenzene (Cumene)	0.0012 U	0.0025 U	0.0011 U	--	--	0.0010 U	0.00079 U	0.0010 U	8,000	
Methyl Iodide (Iodomethane)	0.0059 U	0.012 U	0.0056 U	--	--	0.0052 U	0.0039 U	0.0051 U	NE	
Methyl t-butyl ether	0.0012 U	0.0025 U	0.0011 U	--	--	0.0010 U	0.00079 U	0.0010 U	0.1	
Methylene Chloride	0.012 U	0.025 U	0.011 U	--	--	0.010 U	0.0079 U	0.010 U	0.02	
Naphthalene	0.061 U	0.097 U	0.0011 U	--	--	0.0010 U	0.00079 U	0.0010 U	5	
n-Butylbenzene	0.061 U	0.097 U	0.0011 U	--	--	0.0010 U	0.00079 U	0.0010 U	4,000	
n-Propylbenzene	0.061 U	0.097 U	0.0011 U	--	--	0.0013	0.00079 U	0.0010 U	8,000	
p-Isopropyltoluene	0.061 U	0.097 U	0.0011 U	--	--	0.0010 U	0.00079 U	0.0010 U	NE	
Sec-Butylbenzene	0.061 U	0.097 U	0.0011 U	--	--	0.0010 U	0.00079 U	0.0010 U	8,000	
Styrene	0.0012 U	0.0025 U	0.0011 U	--	--	0.0010 U	0.00079 U	0.0010 U	16,000	
Tert-Butylbenzene	0.061 U	0.097 U	0.0011 U	--	--	0.0010 U	0.00079 U	0.0010 U	8,000	
Tetrachloroethene	0.0012 U	0.0025 U	0.0011 U	--	--	0.0010 U	0.00079 U	0.0010 U	0.05	
Toluene	0.0059 U	0.012 U	0.0056 U	--	--	0.0052 U	0.0039 U	0.0051 U	7	
Trans-1,2-Dichloroethene	0.0012 U	0.0025 U	0.0011 U	--	--	0.0010 U	0.00079 U	0.0010 U	1,600	
Trans-1,3-Dichloropropene	0.0012 U	0.0025 U	0.0011 U	--	--	0.0010 U	0.00079 U	0.0010 U	NE	
Trichloroethene	0.0012 U	0.0025 U	0.0011 U	--	--	0.0010 U	0.00079 U	0.0010 U	0.03	
Trichlorofluoromethane (CFC-11)	0.0012 U	0.0025 U	0.0011 U	--	--	0.0010 U	0.00079 U	0.0010 U	24,000	
Vinyl Acetate	0.0059 U	0.012 U	0.0056 U	--	--	0.0052 U	0.0039 U	0.0051 U	80,000	

N/A

Boring Identification	FL363-B6			FL363-B7					MTCA Method A/B Cleanup Level <sup>12</sup>	Naturally Occurring Background Metals in Puget Sound Soils <sup>15</sup>
	Sample Identification <sup>2</sup>	FL363-B6-6-7	FL363-B6-11-12	FL363-B6-17-18	FL363-B7-0-0.5	FL363-B7-0.5-1	FL363-B7-6-7	FL363-B7-10-11		
Sample Date	10/4/2017	10/4/2017	10/4/2017	10/4/2017	10/4/2017	10/4/2017	10/4/2017	10/4/2017	10/4/2017	
Sample Start Depth (feet bgs)	6.0	11	17	0.0	0.5	6.0	10	17		
Sample End Depth (feet bgs)	7.0	12	18	0.5	1.0	7.0	11	18		
Vinyl Chloride	0.0012 U	0.0025 U	0.0011 U	--	--	0.0010 U	0.00079 U	0.0010 U	240	
Xylene, m-,p-	0.0024 U	0.0049 U	0.0023 U	--	--	<b>0.011</b>	<b>0.0059</b>	0.0020 U	9	
Xylene, o-	0.0012 U	0.0025 U	0.0011 U	--	--	<b>0.0025</b>	<b>0.0018</b>	0.0010 U		
Total Xylenes <sup>7</sup>	0.0024 U	0.0049 U	0.0023 U	--	--	<b>0.0135</b>	<b>0.0077</b>	0.0020 U		
<b>PAHs<sup>10</sup> (mg/kg)</b>										
1-Methylnaphthalene	0.0073 U	0.0096 U	0.0077 U	--	--	0.0074 U	0.0077 U	0.0075 U	5	
2-Methylnaphthalene	0.0073 U	0.0096 U	0.0077 U	--	--	0.0074 U	0.0077 U	0.0075 U		
Naphthalene	0.0073 U	<b>0.0099</b>	0.0077 U	--	--	0.0074 U	0.0077 U	0.0075 U		
Total Naphthalenes <sup>11</sup>	0.0073 U	<b>0.0099</b>	0.0077 U	--	--	0.0074 U	0.0077 U	0.0075 U		
Acenaphthene	0.0073 U	0.0096 U	0.0077 U	--	--	0.0074 U	0.0077 U	0.0075 U	4,800	
Acenaphthylene	0.0073 U	0.0096 U	0.0077 U	--	--	0.0074 U	0.0077 U	0.0075 U	NE	
Anthracene	0.0073 U	0.0096 U	0.0077 U	--	--	0.0074 U	0.0077 U	0.0075 U	24,000	
Benzo(a)anthracene	0.0073 U	0.0096 U	0.0077 U	--	--	0.0074 U	0.0077 U	0.0075 U	See cPAHs	
Benzo(a)pyrene	0.0073 U	0.0096 U	0.0077 U	--	--	0.0074 U	0.0077 U	0.0075 U	See cPAHs	
Benzo(b)fluoranthene	0.0073 U	0.0096 U	0.0077 U	--	--	0.0074 U	0.0077 U	0.0075 U	See cPAHs	
Benzo(g,h,i)perylene	0.0073 U	0.0096 U	0.0077 U	--	--	0.0074 U	0.0077 U	0.0075 U	NE	
Benzo(j,k)fluoranthene	0.0073 U	0.0096 U	0.0077 U	--	--	0.0074 U	0.0077 U	0.0075 U	See cPAHs	
Chrysene	0.0073 U	0.0096 U	0.0077 U	--	--	0.0074 U	0.0077 U	0.0075 U	See cPAHs	
Dibenzo(a,h)anthracene	0.0073 U	0.0096 U	0.0077 U	--	--	0.0074 U	0.0077 U	0.0075 U	See cPAHs	
Fluoranthene	0.0073 U	0.0096 U	0.0077 U	--	--	0.0074 U	0.0077 U	0.0075 U	3,200	
Fluorene	0.0073 U	0.0096 U	0.0077 U	--	--	0.0074 U	0.0077 U	0.0075 U	3,200	
Indeno(1,2,3-c,d)pyrene	0.0073 U	0.0096 U	0.0077 U	--	--	0.0074 U	0.0077 U	0.0075 U	See cPAHs	
Phenanthrene	0.0073 U	0.0096 U	0.0077 U	--	--	0.0074 U	0.0077 U	0.0075 U	NE	
Pyrene	0.0073 U	0.0096 U	0.0077 U	--	--	0.0074 U	0.0077 U	0.0075 U	2,400	
cPAHs (benzo(a)pyrene toxicity equivalent concentration) <sup>14</sup>	0.0055 U	0.0072 U	0.0058 U	--	--	0.0056 U	0.0058 U	0.0057 U	0.1	

**Notes:**

<sup>1</sup> Chemical analysis performed by OnSite Environmental, Inc., of Redmond, Washington.

<sup>2</sup> Sample ID = Parcel ID - boring number - depth of sample [feet bgs]. FL358-B1-0.5-1 = Boring 1 from Parcel FL358, collected from a depth of 0.5 to 1 feet bgs.

<sup>3</sup> Gasoline-range petroleum hydrocarbons by Northwest Method NWTPH-Gx.

<sup>4</sup> Diesel- and lube oil-range petroleum hydrocarbons by Northwest Method NWTPH-Dx.

<sup>5</sup> Resource Conservation Recovery Act (RCRA) metals analyzed by EPA 6000/7000 series method.

<sup>6</sup> Benzene, toluene, ethylbenzene, xylenes (BTEX) by United States Environmental Protection Agency (EPA) Method 8021B.

<sup>7</sup> Total xylenes consists of m,p- and o- xylenes. The higher detection limit is used for non-detects.

<sup>8</sup> Volatile organic compounds (VOCs) analyzed by United States Environmental Protection Agency (EPA) Method 8260C.

<sup>9</sup> Acetone is a common laboratory contaminant.

<sup>10</sup> Polycyclic aromatic hydrocarbons (PAHs) and carcinogenic PAHs (cPAHs) analyzed by EPA Method 8270D/SIM.

<sup>11</sup> Total naphthalenes consists of 1-methylnaphthalene, 2-methylnaphthalene and naphthalene.

<sup>12</sup> MTCA Method B cleanup level used when Method A cleanup level has not been established.

<sup>13</sup> Model Toxics Control Act (MTCA) Method A cleanup level for gasoline is 30 mg/kg if benzene is detected or if the sum of toluene, ethylbenzene and xylenes are greater than or equal to 1% of the total gasoline detection.

<sup>14</sup> Results for cPAHs are shown as the sum of the benzo[a]pyrene toxicity equivalent concentrations, calculated by multiplying each individual cPAH concentration by its corresponding TEF. In this sum, non-detects are represented as ½ of the corresponding analyte reporting limit multiplied by the TEF.

<sup>15</sup> 90th Percentile for natural background soil metals concentrations in Puget Sound region, Department of Ecology, publication #94-115, dated October 1994.

<sup>16</sup> Hydrocarbons in the lube oil-range are impacting the diesel-range result.

"-" = not tested

mg/kg = milligrams per kilogram

MTCA = Model Toxics Control Act

U = Analyte was not detected at or greater than the listed reporting limit.

TEF = Toxicity Equivalency Factor as defined in WAC 173-340-900 Table 708-2.

**Bold** font type indicates that the analyte was detected at a concentration greater than the respective laboratory reporting limit.

**Grey shading** indicates that the detected result exceeds the specified MTCA Cleanup Level.

**Table 4**

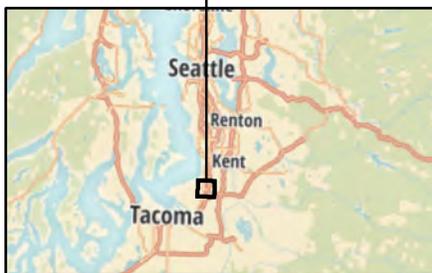
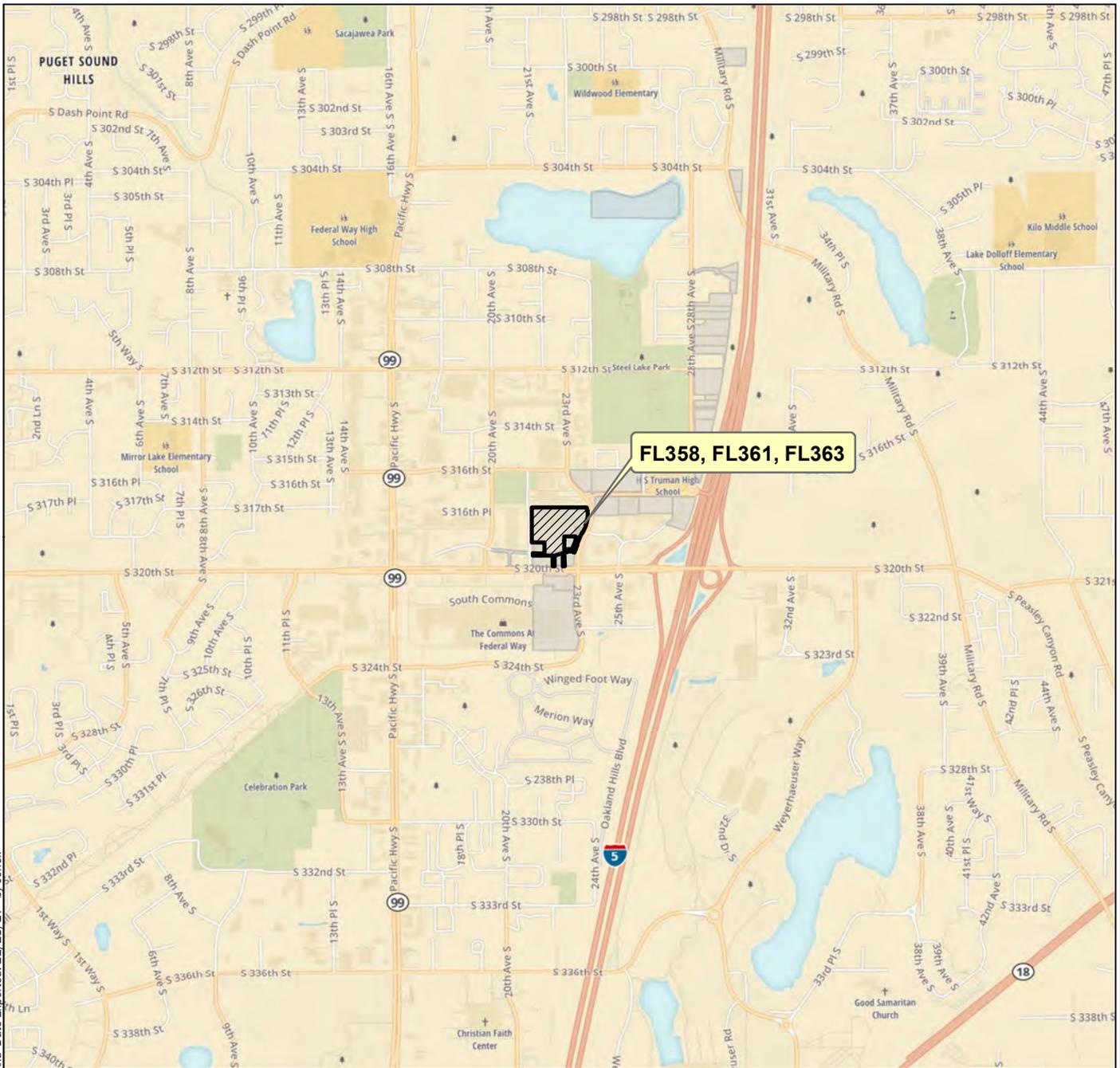
**Summary of Groundwater Chemical Analytical Results<sup>1</sup> - ARCO Explorations  
Sound Transit - Federal Way Link Extension FL358/FL361/FL363  
Federal Way, Washington**

Well Identification	FL363-B4	FL363-B5	FL363-B6	FL363-B7	ARCO-MW31	ARCO-MW32	ARCO-MW37	MTCA Method A/B Cleanup Level <sup>10</sup>
Sample Identification <sup>2</sup>	FL363-B4-171004-W	FL363-B5-171004-W	FL363-B6-171004-W	FL363-B7-171004-W	ARCO-MW31	ARCO-MW32	ARCO-MW37	
Sample Date	10/4/2017	10/4/2017	10/4/2017	10/4/2017	10/9/2017	10/9/2017	10/9/2017	
<b>NWTPH-Gx<sup>3</sup> (ug/L)</b>								
Gasoline-range hydrocarbons	<b>24,000</b>	<b>7,200</b>	100 U	100 U	100 U	100 U	100 U	800/1,000 <sup>11</sup>
<b>NWTPH-Dx<sup>4</sup> (mg/L)</b>								
Diesel-range hydrocarbons	<b>2.3<sup>13</sup></b>	<b>1.1<sup>13</sup></b>	0.31 U	0.28 U	0.26 U	<b>0.35</b>	<b>0.33</b>	0.5
Lube Oil-range Hydrocarbons	<b>0.52</b>	0.42 U	<b>0.48</b>	0.44 U	0.41 U	0.41 U	<b>0.46</b>	0.5
<b>Metals<sup>5</sup> (ug/L)</b>								
Lead	<b>29</b>	<b>29</b>	<b>50</b>	<b>180</b>	<b>8.1</b>	1.1 U	1.1 U	15
<b>VOCs<sup>6</sup> (ug/L)</b>								
1,1,1,2-Tetrachloroethane	4.0 U	4.0 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	1.68
1,1,1-Trichloroethane	4.0 U	4.0 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	200
1,1,2,2-Tetrachloroethane	5.0 U	5.0 U	0.25 U	0.25 U	0.20 U	0.20 U	0.20 U	0.219
1,1,2-Trichloroethane	4.0 U	4.0 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.768
1,1-Dichloroethane	4.0 U	4.0 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	7.68
1,1-Dichloroethene	4.0 U	4.0 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	400
1,1-Dichloropropene	4.0 U	4.0 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	NE
1,2,3-Trichlorobenzene	4.0 U	4.0 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	NE
1,2,3-Trichloropropane	4.0 U	4.0 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.00146
1,2,4-Trichlorobenzene	4.0 U	4.0 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	1.51
1,2,4-Trimethylbenzene	<b>860</b>	<b>180</b>	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	NE
1,2-Dibromo-3-Chloropropane	20 U	20 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	0.0547
1,2-Dibromoethane	4.0 U	4.0 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.01
1,2-Dichlorobenzene (o-Dichlorobenzene)	4.0 U	4.0 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	720
1,2-Dichloroethane	4.0 U	4.0 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	5
1,2-Dichloropropane	4.0 U	4.0 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	1.22
1,3,5-Trimethylbenzene	<b>230</b>	<b>41</b>	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	80
1,3-Dichlorobenzene (m-Dichlorobenzene)	4.0 U	4.0 U	<b>0.31</b>	0.20 U	0.20 U	0.20 U	0.20 U	NE
1,3-Dichloropropane	4.0 U	4.0 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	NE
1,4-Dichlorobenzene (p-Dichlorobenzene)	4.0 U	4.0 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	8.10
2,2-Dichloropropane	4.0 U	4.0 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	NE
2-Butanone (MEK)	100 U	100 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	4,800
2-Chloroethyl vinyl ether	78 U	78 U	3.9 U	3.9 U	10 U	10 U	10 U	NE
2-Chlorotoluene	4.0 U	4.0 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	160
2-Hexanone	40 U	40 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NE
4-Chlorotoluene	4.0 U	4.0 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	NE
4-Methyl-2-Pentanone (Methyl isobutyl ketone)	50 U	50 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	640
Acetone	200 U	200 U	10 U	10 U	5.0 U	5.0 U	5.0 U	7,200
Benzene	4.0 U	<b>510</b>	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	5
Bromobenzene	4.0 U	4.0 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	NE
Bromochloromethane	4.0 U	4.0 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	NE
Bromodichloromethane	4.0 U	4.0 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.706
Bromoform (Tribromomethane)	20 U	20 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.54
Bromomethane	4.0 U	4.0 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	11.2
Carbon Disulfide	4.0 U	4.0 U	0.20 U	0.20 U	0.27 U	0.27 U	0.27 U	800
Carbon Tetrachloride	4.0 U	4.0 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.625

Well Identification	FL363-B4	FL363-B5	FL363-B6	FL363-B7	ARCO-MW31	ARCO-MW32	ARCO-MW37	MTCA Method A/B Cleanup Level <sup>10</sup>
Sample Identification <sup>2</sup>	FL363-B4-171004-W	FL363-B5-171004-W	FL363-B6-171004-W	FL363-B7-171004-W	ARCO-MW31	ARCO-MW32	ARCO-MW37	
Sample Date	10/4/2017	10/4/2017	10/4/2017	10/4/2017	10/9/2017	10/9/2017	10/9/2017	
Chlorobenzene	4.0 U	4.0 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	160
Chloroethane	20 U	20 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	NE
Chloroform	4.0 U	4.0 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	1.41
Chloromethane	20 U	20 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	NE
cis-1,2-Dichloroethene	4.0 U	4.0 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	16
cis-1,3-Dichloropropene	4.0 U	4.0 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	NE
Dibromochloromethane	4.0 U	4.0 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.521
Dibromomethane	4.0 U	4.0 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	80
Dichlorodifluoromethane (CFC-12)	7.4 U	7.4 U	0.37 U	0.37 U	0.20 U	0.20 U	0.20 U	1,600
Ethylbenzene	430	340	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	700
Hexachlorobutadiene	4.0 U	4.0 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.561
Isopropylbenzene (Cumene)	33	29	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	800
Methyl Iodide (Iodomethane)	26 U	26 U	1.3 U	1.3 U	2.0 U	2.0 U	2.0 U	NE
Methyl t-butyl ether	4.0 U	4.0 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	20
Methylene Chloride	20 U	20 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5
Naphthalene	160	28 U	1.4 U	1.4 U	1.3 U	1.3 U	1.3 U	160
n-Butylbenzene	33	14	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	400
n-Propylbenzene	120	78	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	800
p-Isopropyltoluene	4.0 U	4.0 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	NE
Sec-Butylbenzene	9.4	6.4	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	800
Styrene	4.0 U	4.0 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	1,600
Tert-Butylbenzene	4.0 U	4.0 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	800
Tetrachloroethene	4.0 U	4.0 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	5
Toluene	20 U	62	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1,000
Trans-1,2-Dichloroethene	4.0 U	4.0 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	160
Trans-1,3-Dichloropropene	4.0 U	4.0 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	NE
Trichloroethene	4.0 U	4.0 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	5
Trichlorofluoromethane (CFC-11)	4.0 U	4.0 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	2,400
Vinyl Acetate	20 U	20 U	1.0 U	1.0 U	1.3 U	1.3 U	1.3 U	8,000
Vinyl Chloride	4.0 U	4.0 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.2
Xylene, m-,p-	2,000	400	0.40 U	0.40 U	0.40 U	0.40 U	0.40 U	1,000
Xylene, o-	800	26	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	
Total Xylenes <sup>7</sup>	2,800	426	0.40 U	0.40 U	0.40 U	0.40 U	0.40 U	
<b>PAHs<sup>8</sup> (ug/L)</b>								
1-Methylnaphthalene	35	8.2	0.11 U	0.12 U	--	--	--	160
2-Methylnaphthalene	68	14	0.11 U	0.12 U	--	--	--	
Naphthalene	130	16	0.11 U	0.12 U	--	--	--	
Total Naphthalenes <sup>9</sup>	233	38.2	0.11 U	0.12 U	--	--	--	
Acenaphthene	0.24	0.10 U	0.11 U	0.12 U	--	--	--	960
Acenaphthylene	0.11 U	0.10 U	0.11 U	0.12 U	--	--	--	NE
Anthracene	0.11 U	0.10 U	0.11 U	0.12 U	--	--	--	4,800
Benzo(a)anthracene	0.011 U	0.010 U	0.011 U	0.012 U	--	--	--	See cPAHs
Benzo(a)pyrene	0.011 U	0.010 U	0.011 U	0.012 U	--	--	--	See cPAHs
Benzo(b)fluoranthene	0.011 U	0.010 U	0.011 U	0.012 U	--	--	--	See cPAHs
Benzo(g,h,i)perylene	0.011 U	0.010 U	0.011 U	0.012 U	--	--	--	NE
Benzo(j,k)fluoranthene	0.011 U	0.010 U	0.011 U	0.012 U	--	--	--	See cPAHs
Chrysene	0.011 U	0.010 U	0.011 U	0.012 U	--	--	--	See cPAHs
Dibenzo(a,h)anthracene	0.011 U	0.010 U	0.011 U	0.012 U	--	--	--	See cPAHs
Fluoranthene	0.11 U	0.10 U	0.11 U	0.12 U	--	--	--	640
Fluorene	0.21	0.10 U	0.11 U	0.12 U	--	--	--	640

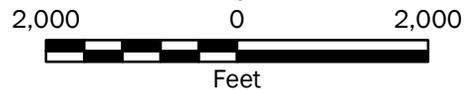
**Notes:**

- <sup>1</sup> Chemical analysis performed by OnSite Environmental, Inc., of Redmond, Washington.
- <sup>2</sup> Sample ID = Parcel ID - boring number - collection date. FL358-MW1-20171006 = MW 1 from Parcel FL358, collected on 10/6/2017.
- <sup>3</sup> Gasoline-range petroleum hydrocarbons by Northwest Method NWTPH-Gx.
- <sup>4</sup> Diesel- and lube oil-range petroleum hydrocarbons by Northwest Method NWTPH-Dx.
- <sup>5</sup> Resource Conservation Recovery Act (RCRA) metals analyzed by United States Environmental Protection Agency (EPA) Method 200.8.
- <sup>6</sup> Volatile organic compounds (VOCs) analyzed by United States Environmental Protection Agency (EPA) Method 8260C.
- <sup>7</sup> Total xylenes consists of m,p- and o- xylenes. The higher detection limit is used for non-detects.
- <sup>8</sup> Polycyclic aromatic hydrocarbons (PAHs) and carcinogenic PAHs (cPAHs) analyzed by EPA Method 8270D/SIM.
- <sup>9</sup> Total naphthalenes consists of 1-methylnaphthalene, 2-methylnaphthalene and naphthalene.
- <sup>10</sup> MTCA Method B cleanup level used when Method A cleanup level has not been established.
- <sup>11</sup> Model Toxics Control Act (MTCA) Method A cleanup level for gasoline is 800 µg/L if benzene is detected. calculated by multiplying each individual cPAH concentration by its corresponding TEF. In this sum, non-detects are represented as ½ of the corresponding analyte reporting limit multiplied by the TEF.
- <sup>13</sup> According to the laboratory, hydrocarbons in the gasoline range are impacting the diesel range result.
- U = Analyte was not detected at or greater than the listed reporting limit.
- TEF = Toxicity Equivalency Factor as defined in WAC 173-340-900 Table 708-2.
- Bold** font type indicates that the analyte was detected at a concentration greater than the respective laboratory reporting limit.
- Grey shading indicates that the detected result exceeds the specified MTCA Cleanup Level.



**Legend**

-  Subject Property
-  Project Parcel



**Vicinity Map**

**FL358, FL361, FL363**

Phase I Environmental Site Assessment  
Federal Way Link Extension  
Federal Way, Washington



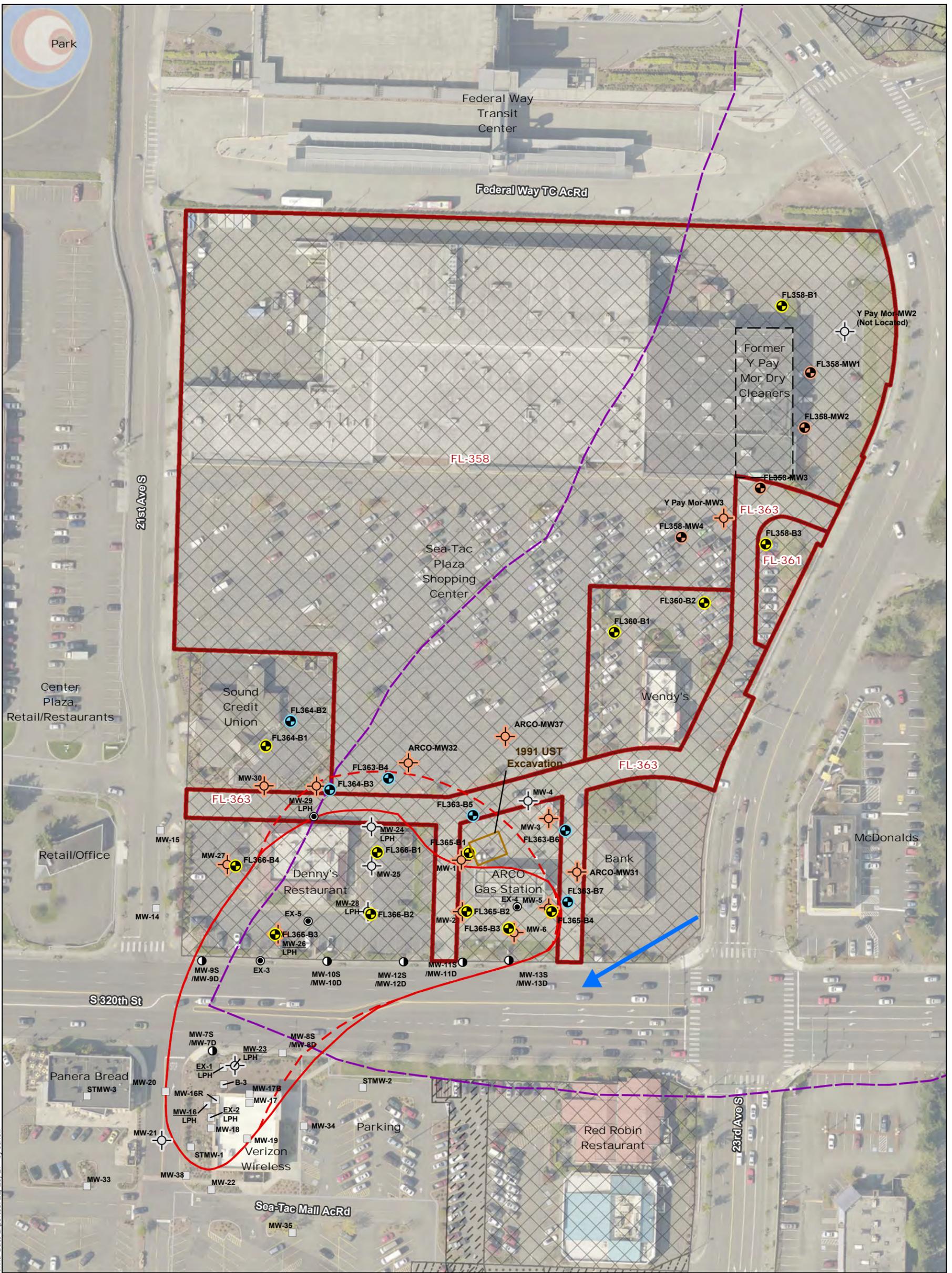
**Figure 1**

**Notes:**

1. The locations of all features shown are approximate.
2. This drawing is for information purposes. It is intended to assist in showing features discussed in an attached document. GeoEngineers, Inc. cannot guarantee the accuracy and content of electronic files. The master file is stored by GeoEngineers, Inc. and will serve as the official record of this communication.

Data Source: Mapbox Open Street Map, 2017

Projection: NAD 1983 UTM Zone 10N



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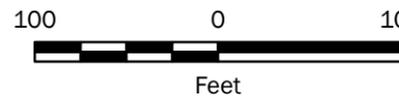
**Legend**

- |  |   |  |  |  |  |
|--|---|--|--|--|--|
|  | GeoEngineers Phase II ESA Monitoring Well               |  | Dual Completion Well Location                  |  | Boundary Mapped Historic Drainage Area (c. 1949) |
|  | GeoEngineers Phase II ESA Soil Boring                   |  | Extraction Well Location                       |  | Subject Property                                 |
|  | GeoEngineers Phase II ESA Boring with Grab Water Sample |  | Abandoned or Destroyed Well Location           |  | Parcel   |
|  | Monitoring Well by Others Not Sampled or Located        |  | Estimate of gas plume >MTCA based on 2015 data |  | Access Easement                                  |
|  | Monitoring Well by Others Sampled for Phase II ESA      |  | Estimate of gas plume >MTCA based on 2017 data |  | Fee Take   |
|  | Liquid Phase Hydrocarbons in Past                       |  |  |  | Guideway Easement                                |
|  |   |  |  |  | Permanent and Slope Easement                     |
|  |   |  |  |  | Temporary Construction Easement                  |
|  |   |  |  |  | Approximate Groundwater Flow Direction           |

**Notes:**

1. Based on current design information for the FWLE project (HDR, provided in October 2017)
  2. The locations of all features shown are approximate. 3. This drawing is for information purposes. It is intended to assist in showing features discussed in an attached document. GeoEngineers, Inc. cannot guarantee the accuracy and content of electronic files. The master file is stored in GeoEngineers, Inc. and will serve as the official record of this communication.
- Data Source: Aerial and road names from King County 2015.

Parcel #: 2423200050, 2423200010, 2423200060  
 Address: 2200 S 320TH ST  
 City: Federal Way  
 Owner: WINSON AT FEDERAL WAY, LLC.  
 Current Use: Sea-Tac Plaza, Vacant(Commercial), Right of Way/Utility, Road

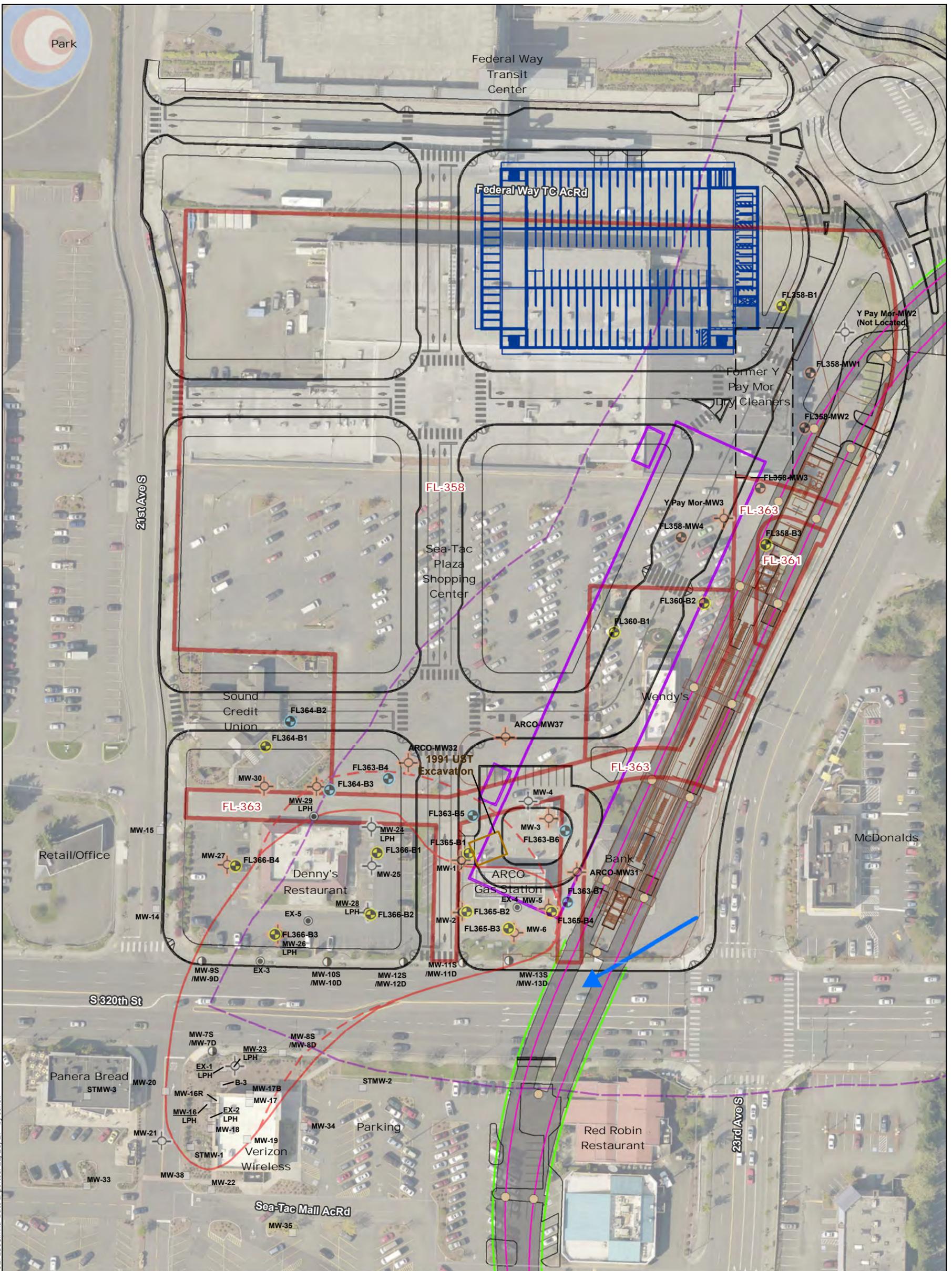


**Site Plan and Boring Location Map  
FL358, FL361, FL363**

Phase II ESA  
 Federal Way Link Extension  
 Federal Way, Washington



**Figure 2**



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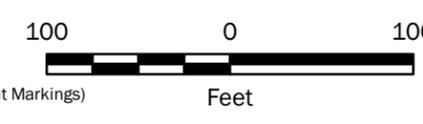
**Legend**

- |  |  |  |   |
|--|--|--|---|
| <ul style="list-style-type: none"> <li> GeoEngineers Phase II ESA Monitoring Well</li> <li> GeoEngineers Phase II ESA Soil Boring</li> <li> GeoEngineers Phase II ESA Boring with Grab Water Sample</li> <li> Monitoring Well by Others Not Sampled or Located</li> <li> Monitoring Well by Others Sampled for Phase II ESA</li> <li> Liquid Phase Hydrocarbons in Past</li> </ul> | <ul style="list-style-type: none"> <li> Dual Completion Well Location</li> <li> Extraction Well Location</li> <li> Abandoned or Destroyed Well Location</li> <li> Estimate of gas plume &gt;MTCa based on 2015 data</li> <li> Estimate of gas plume &gt;MTCa based on 2017 data</li> </ul> | <ul style="list-style-type: none"> <li> Boundary Mapped Historic Drainage Area (c. 1949)</li> <li> Subject Property</li> <li> Parcel</li> </ul> <p><b>Planned Construction Features</b></p> <ul style="list-style-type: none"> <li> Column</li> <li> Track</li> <li> Parking Structure</li> <li> Road/Parking/Sidewalk</li> <li> Approximate Groundwater Flow Direction</li> </ul> | <ul style="list-style-type: none"> <li> Station (line)</li> <li> Stormwater Ponds and Vaults</li> <li> Wall</li> <li> TPSS - Traction</li> <li> Striping (Pavement Markings)</li> <li> Sewer</li> <li> Structure</li> </ul> |
|--|--|--|---|

**Notes:**

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 2. The locations of all features shown are approximate. 3. This drawing is for information purposes. It is intended to assist in showing features discussed in an attached document. GeoEngineers, Inc. cannot guarantee the accuracy and content of electronic files. The master file is stored by GeoEngineers, Inc. and will serve as the official record of this communication.  
 Data Source: Aerial and road names from King County 2015.

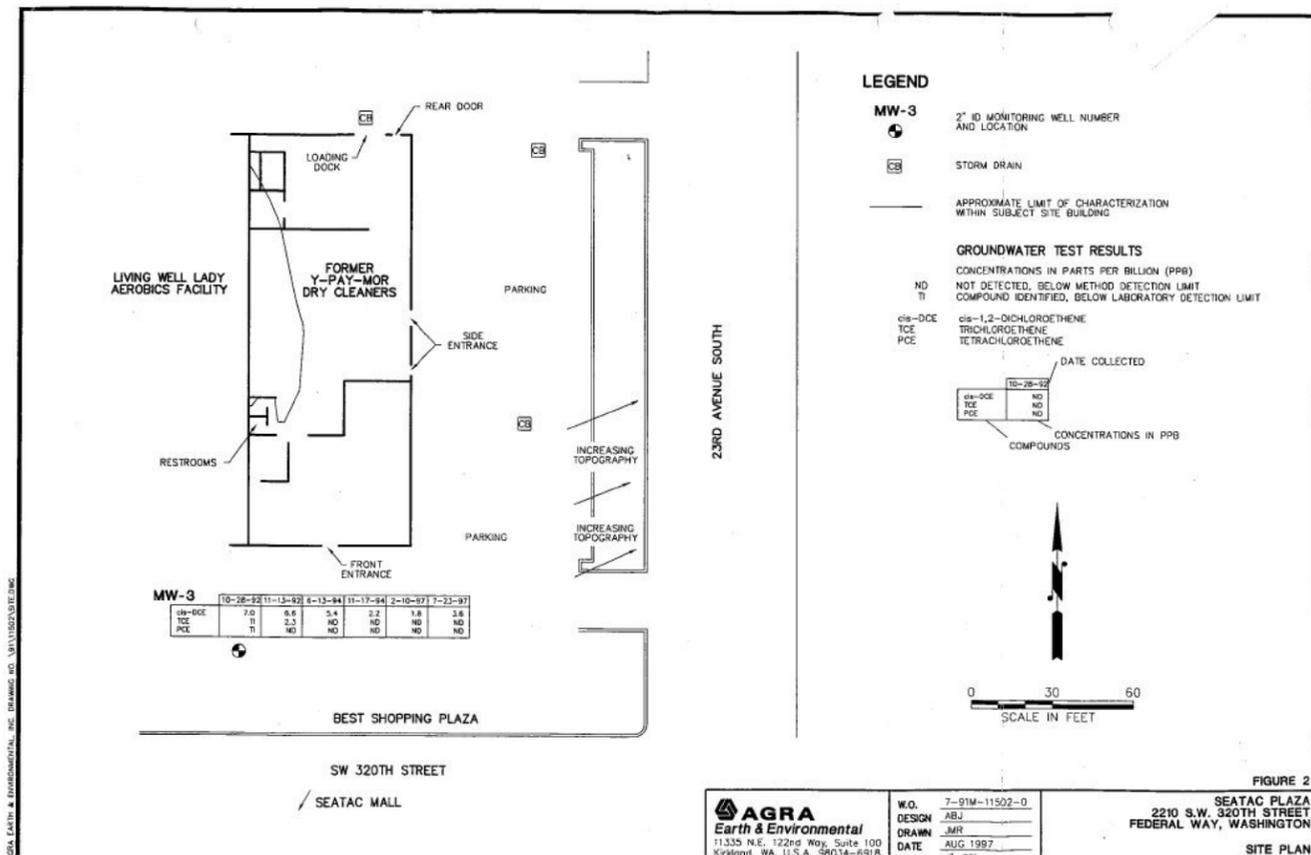
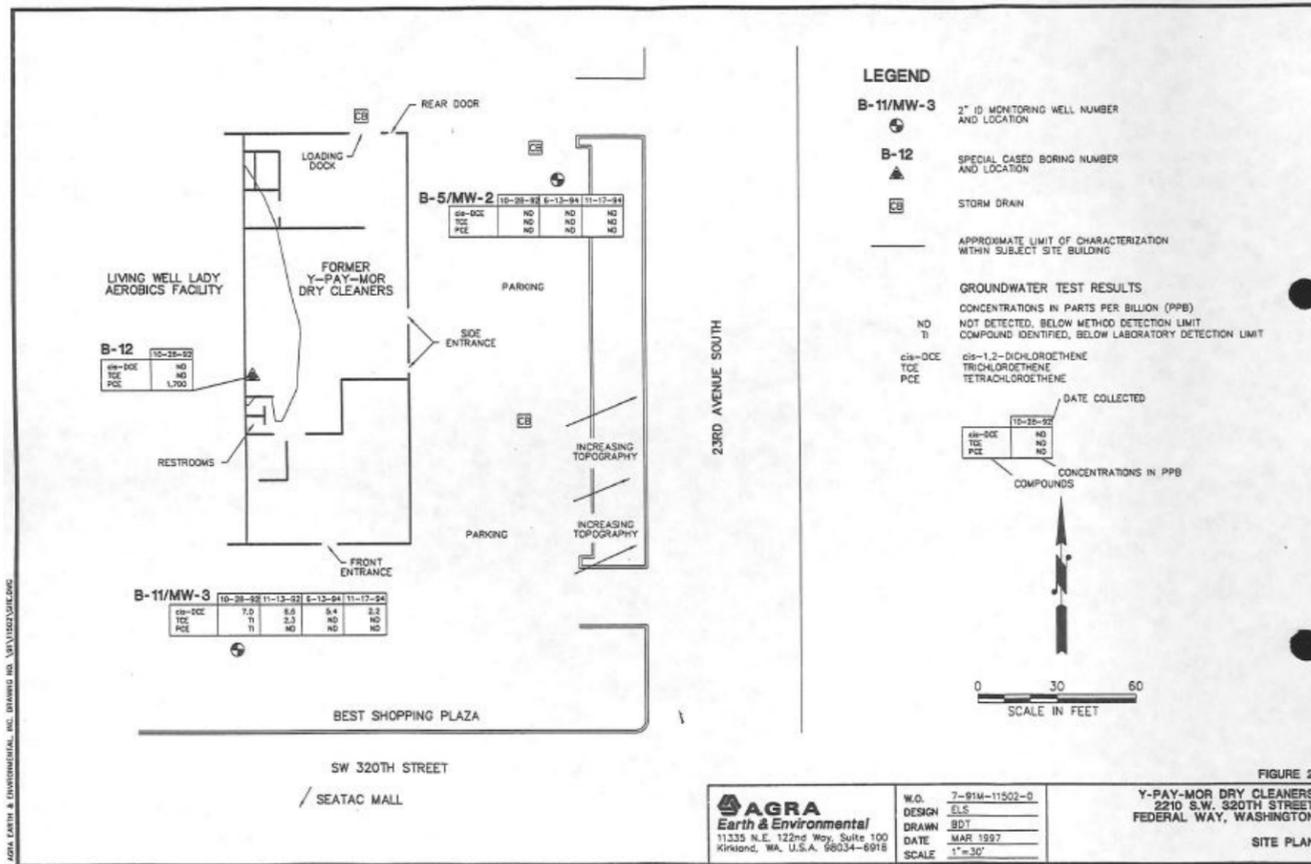
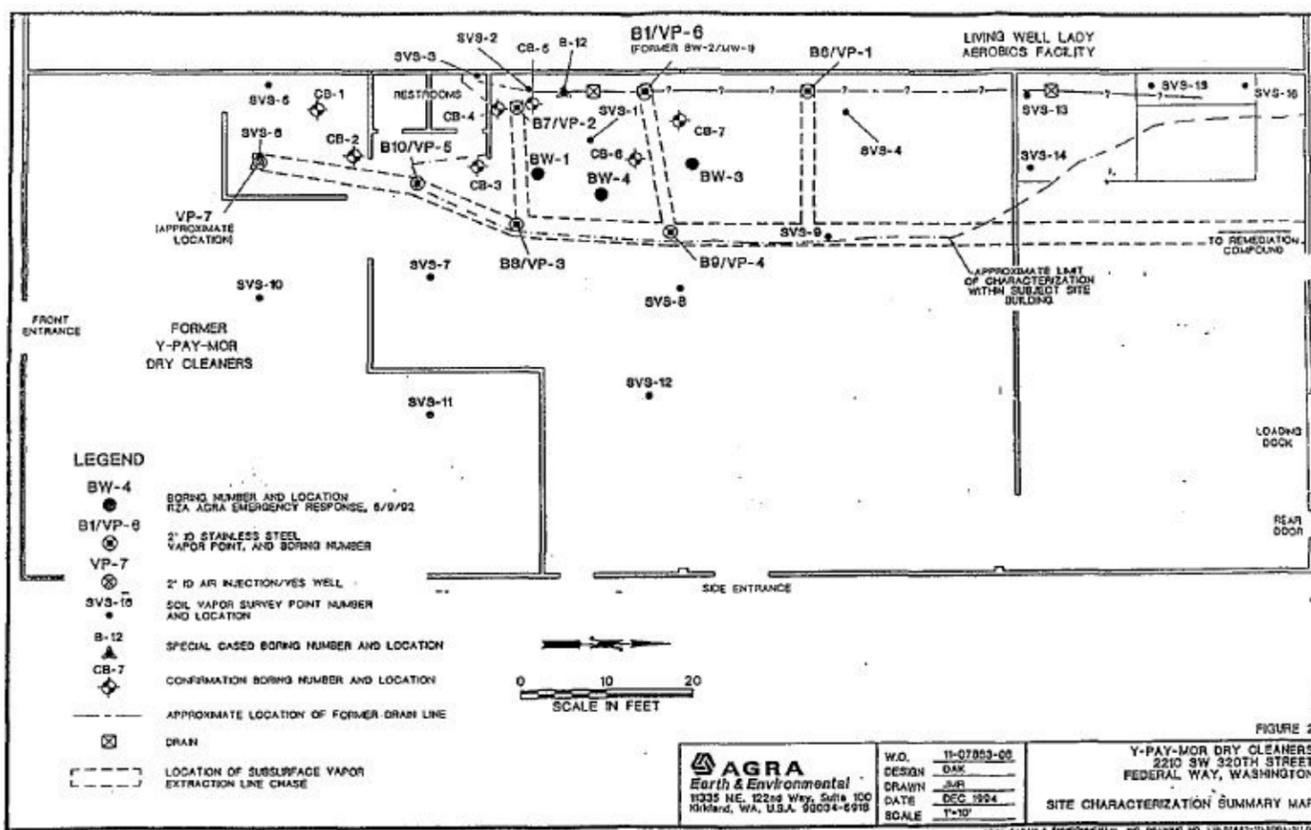
Parcel #: 2423200050, 2423200010, 2423200060  
 Address: 2200 S 320TH ST  
 City: Federal Way  
 Owner: WINSON AT FEDERAL WAY, LLC.  
 Current Use: Sea-Tac Plaza, Vacant(Commercial), Right of Way/Utility, Road



**Proposed Construction Plan -  
FL358, FL361, FL363**

Phase II ESA  
Federal Way Link Extension  
Federal Way, Washington

**Figure 3**



Y Pay Mor Previous Explorations  
FL358, FL361, FL363

Phase II ESA  
Federal Way Link Extension  
Federal Way, Washington

**GEOENGINEERS**

Figure 4



**Soil Analysis, October 2017**

Gasoline and related constituents	PCE and related constituents	● Detected > MTCA
		● Detected < MTCA
		● ND
		○ Not Tested

Note: Depths vary, see Tables 1 and 3

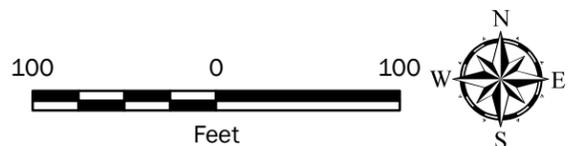
**Legend**

- |   |  |  |
|---|--|--|
| ● GeoEngineers Phase II ESA Monitoring Well               | ● Dual Completion Well Location                  | ▭ Boundary Mapped Historic Drainage Area (c. 1949) |
| ● GeoEngineers Phase II ESA Soil Boring                   | ● Extraction Well Location                       | ▭ Subject Property                                 |
| ● GeoEngineers Phase II ESA Boring with Grab Water Sample | □ Abandoned or Destroyed Well Location           | ▭ Parcel   |
| ○ Monitoring Well by Others Not Sampled or Located        | ▭ Estimate of gas plume >MTCA based on 2015 data | ▭ Access Easement                                  |
| ○ Monitoring Well by Others Sampled for Phase II ESA      | ▭ Estimate of gas plume >MTCA based on 2017 data | ▭ Fee Take   |
| ○ LPH Liquid Phase Hydrocarbons in Past                   |  | ▭ Guideway Easement                                |
|   |  | ▭ Permanent and Slope Easement                     |
|   |  | ▭ Temporary Construction Easement                  |
|   |  | ➡ Approximate Groundwater Flow Direction           |

**Notes:**

1. Based on current design information for the FWLE project (HDR, provided in October 2017)
  2. The locations of all features shown are approximate. 3. This drawing is for information purposes. It is intended to assist in showing features discussed in an attached document. GeoEngineers, Inc. cannot guarantee the accuracy and content of electronic files. The master file is stored by GeoEngineers, Inc. and will serve as the official record of this communication.
- Data Source: Aerial and road names from King County 2015.

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 Address: 2200 S 320TH ST  
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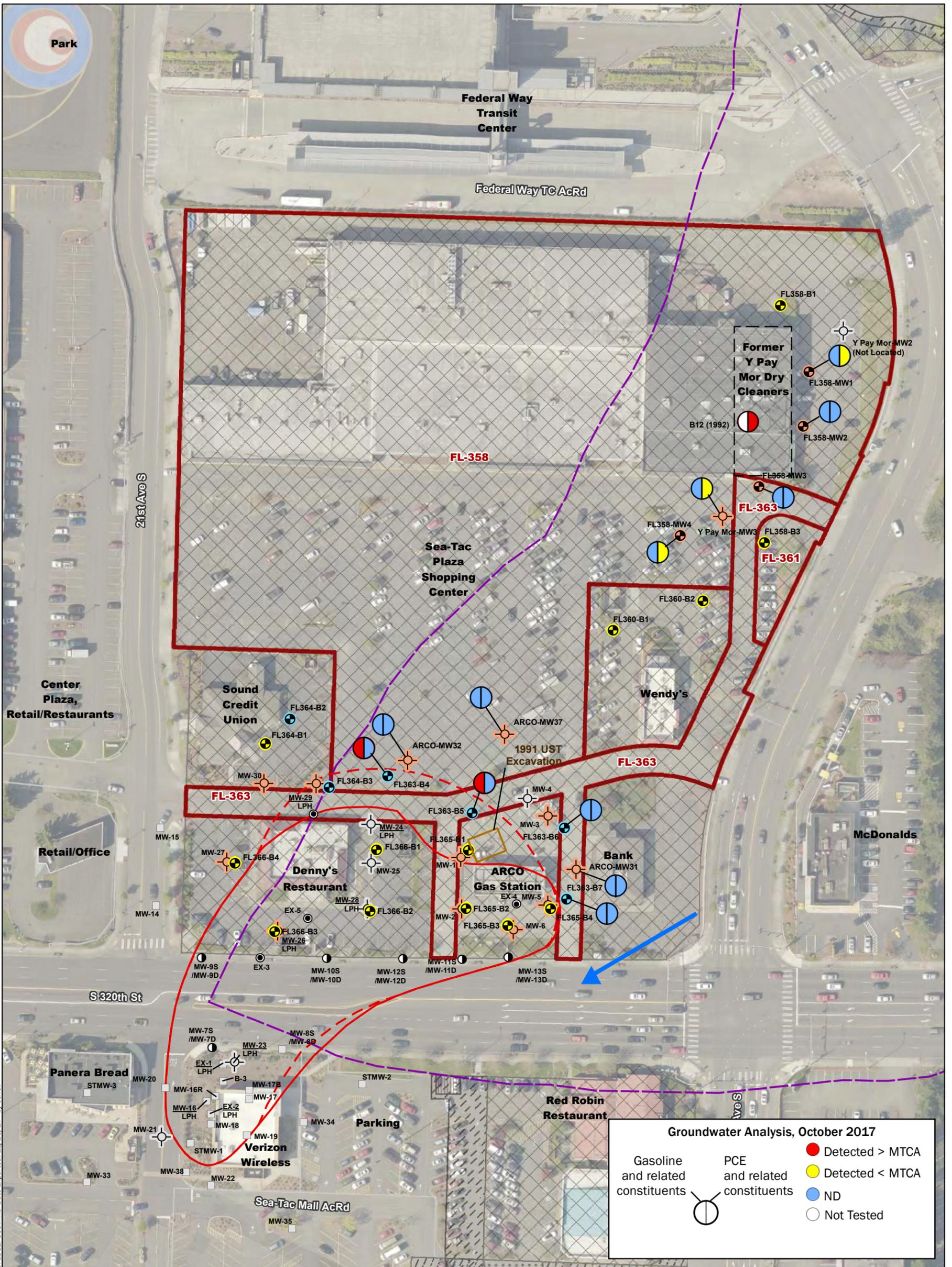
**Chemical Analytical Results Soil  
 FL358, FL361, FL363**

Phase II ESA  
 Federal Way Link Extension  
 Federal Way, Washington



**Figure 5**

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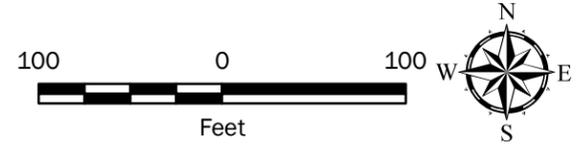


**Groundwater Analysis, October 2017**

Gasoline and related constituents	PCE and related constituents	● Detected > MTCA
		● Detected < MTCA
		● ND
		○ Not Tested

**Legend**

- |  |   |   |
|--|---|---|
| <ul style="list-style-type: none"> <li>● GeoEngineers Phase II ESA Monitoring Well</li> <li>● GeoEngineers Phase II ESA Soil Boring</li> <li>● GeoEngineers Phase II ESA Boring with Grab Water Sample</li> <li>○ Monitoring Well by Others Not Sampled or Located</li> <li>○ Monitoring Well by Others Sampled for Phase II ESA</li> <li>TPH Liquid Phase Hydrocarbons in Past</li> </ul> | <ul style="list-style-type: none"> <li>● Dual Completion Well Location</li> <li>● Extraction Well Location</li> <li>□ Abandoned or Destroyed Well Location</li> <li>□ Estimate of gas plume &gt;MTCA based on 2015 data</li> <li>□ Estimate of gas plume &gt;MTCA based on 2017 data</li> </ul> | <ul style="list-style-type: none"> <li>□ Boundary Mapped Historic Drainage Area (c. 1949)</li> <li>□ Subject Property</li> <li>□ Parcel</li> <li>□ Access Easement</li> <li>□ Fee Take</li> <li>□ Guideway Easement</li> <li>□ Permanent and Slope Easement</li> <li>□ Temporary Construction Easement</li> <li>→ Approximate Groundwater Flow Direction</li> </ul> |
|--|---|---|
- Notes:**
1. Based on current design information for the FWLE project (HDR, provided in October 2017)
  2. The locations of all features shown are approximate. 3. This drawing is for information purposes. It is intended to assist in showing features discussed in an attached document. GeoEngineers, Inc. cannot guarantee the accuracy and content of electronic files. The master file is stored by GeoEngineers, Inc. and will serve as the official record of this communication.
- Data Source: Aerial and road names from King County 2015.



**Chemical Analytical Results Groundwater  
FL358, FL361, FL363**

Phase II ESA  
Federal Way Link Extension  
Federal Way, Washington

**GEOENGINEERS**

**Figure 6**

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Parcel #: 2423200050, 2423200010, 2423200060  
Address: 2200 S 320TH ST  
City: Federal Way  
Owner: WINSON AT FEDERAL WAY, LLC.  
Current Use: Sea-Tac Plaza, Vacant(Commercial), Right of Way/Utility, Road

**APPENDIX A**  
**FIELD EXPLORATION PROGRAM**

# APPENDIX A

## FIELD PROCEDURES AND BORING LOGS

---

### Underground Utility Locate

Prior to drilling activities, an underground utility locate was conducted in the areas of the proposed boring locations to identify subsurface utilities and/or potential underground physical hazards. The underground utility check consisted of contacting a local utility alert service (one-call) and hiring a private utility locating service.

### Soil Sampling

The direct-push explorations were completed using direct-push drilling equipment. Soil samples were obtained using a 5-foot-long core sampler. The sampler was driven into the soil using a pneumatic hammer. Upon retrieval, the sampler was opened and a GeoEngineers representative examined the soil and performed field screening tests. The boring logs are presented in Figures A-2 through A-11. Selected photographs taken during the Phase II ESA drilling are presented as Figures A-12 through A-17.

Selected soil samples were obtained in glass jars (supplied by the analytical laboratory), labeled and stored in a cooler with ice pending delivery to the laboratory. VOC samples were collected first, directly from the sample sleeve using the 5035A sampling method. Following the VOC sample collection, the remaining soil was placed in sample containers provided by the analytical laboratory. All sampling equipment was decontaminated between samples using a Liqui-Nox® wash solution and distilled water rinse.

Soil samples obtained from the explorations were collected from the sampler with a stainless-steel knife, a stainless-steel trowel and/or new gloves. A portion of each sample was placed in laboratory-prepared sample jars for possible chemical analysis. The remaining portion of each sample was used for field screening.

The samples collected from the borings were identified using the following identification system: FL358-B1-3.5-4.5, where FL358 is the identified Federal Way Link Extension parcel(s) on which or adjacent to which the boring was located, B1 is the boring number and the approximate depth at which the sample was obtained (e.g., FL358-B1-3.5-4.5 was collected from the FL358 parcel at boring B1 at a depth of approximately 3.5 to 4.5 feet bgs).

Selected samples from the explorations were submitted for chemical analysis based on field screening results. The soil samples were placed in a cooler with ice for transport to the laboratory. Standard chain-of-custody procedures were followed in transporting the soil samples to the laboratory. Drill cuttings were placed in drums pending disposal.

## Field Screening of Soil Samples

Soil samples obtained from the borings were screened in the field for evidence of contamination using: 1) visual examination; 2) sheen screening and 3) vapor headspace screening with a photo-ionization detector (PID). The results of headspace and sheen screening are included in the boring logs.

Visual screening consists of inspecting the soil for stains indicative of petroleum-related contamination. Visual screening is generally more effective when contamination is related to heavy petroleum hydrocarbons, such as motor oil or hydraulic oil, or when hydrocarbon concentrations are high. Sheen screening and headspace vapor screening are more sensitive methods that have been effective in detecting contamination at concentrations less than regulatory cleanup guidelines. Sheen screening involves placing soil in a pan of water and observing the water surface for signs of sheen. Sheen classifications are as follows:

No Sheen (NS)	No visible sheen on water surface.
Slight Sheen (SS)	Light, colorless, dull sheen; spread is irregular, not rapid; sheen dissipates rapidly.
Moderate Sheen (MS)	Light to heavy sheen, may have some color/iridescence; spread is irregular to flowing; few remaining areas of no sheen on water surface.
Heavy Sheen (HS)	Heavy sheen with color/iridescence; spread is rapid; entire water surface may be covered with sheen.

Headspace vapor screening involves placing a soil sample in a plastic sample bag. Air is captured in the bag and the bag is shaken to expose the soil to the air trapped in the bag. The probe of a PID is inserted in the bag and the instrument measures the concentration of combustible vapor in the air removed from the sample headspace. The PID measures concentrations in ppm (parts per million) and is calibrated to isobutylene. The PID is designed to quantify combustible gas and organic vapor concentrations up to 2,500 ppm. A lower threshold of significance of 1 ppm was used in this application. Field screening results are site-specific and vary with soil type, soil moisture content, temperature and type of contaminant.

## Groundwater Sampling Direct-Push Borings

Grab groundwater samples were obtained from direct-push borings for chemical analysis. Temporary drill casing and well screen were left in place in each boring to collect a groundwater sample. Groundwater was purged from each temporary sampling point using a peristaltic pump and disposable tubing until water from boring was clear. After well purging, the groundwater sample was collected in laboratory-prepared containers. The groundwater sample was then

placed in a cooler with ice and logged on the chain-of-custody record. Purge water was stored in a labeled drum at the site.

The temporary casing and well screen were removed from the boring and the boring location abandoned in accordance with Washington State regulations.

### **Monitoring Wells**

Groundwater samples were obtained from newly installed and existing monitoring wells using low-flow/low-turbidity sampling techniques to minimize the suspension of particulates in the samples. Groundwater samples were obtained from the monitoring wells using a peristaltic pump with disposable tubing. Groundwater was pumped at approximately 0.5 liters per minute from the approximate midpoint of the screened interval. A water quality measuring system with a flow-through-cell was used to monitor the following water quality parameters during purging: electrical conductivity, dissolved oxygen, pH, turbidity, oxidation-reduction potential and temperature. Ambient groundwater conditions were assumed to have been reached once these parameters varied by less than 10 percent on three consecutive measurements. All field measurements were documented on the field logs.

After well purging, the flow-through-cell was disconnected and the groundwater sample was collected in laboratory-prepared containers. The groundwater sample was placed in a cooler with ice and logged on the chain-of-custody record. Purge water was stored in a labeled drum at the site.

## SOIL CLASSIFICATION CHART

MAJOR DIVISIONS			SYMBOLS		TYPICAL DESCRIPTIONS
			GRAPH	LETTER	
COARSE GRAINED SOILS	GRAVEL AND GRAVELLY SOILS	CLEAN GRAVELS <small>(LITTLE OR NO FINES)</small>		<b>GW</b>	WELL-GRADED GRAVELS, GRAVEL - SAND MIXTURES
		GRAVELS WITH FINES <small>(APPRECIABLE AMOUNT OF FINES)</small>		<b>GP</b>	POORLY-GRADED GRAVELS, GRAVEL - SAND MIXTURES
		GRAVELS WITH FINES <small>(APPRECIABLE AMOUNT OF FINES)</small>		<b>GM</b>	SILTY GRAVELS, GRAVEL - SAND - SILT MIXTURES
	SAND AND SANDY SOILS	CLEAN SANDS <small>(LITTLE OR NO FINES)</small>		<b>SW</b>	WELL-GRADED SANDS, GRAVELLY SANDS
		SANDS WITH FINES <small>(APPRECIABLE AMOUNT OF FINES)</small>		<b>SP</b>	POORLY-GRADED SANDS, GRAVELLY SAND
		SANDS WITH FINES <small>(APPRECIABLE AMOUNT OF FINES)</small>		<b>SM</b>	SILTY SANDS, SAND - SILT MIXTURES
FINE GRAINED SOILS	SILTS AND CLAYS	LIQUID LIMIT LESS THAN 50		<b>ML</b>	INORGANIC SILTS, ROCK FLOUR, CLAYEY SILTS WITH SLIGHT PLASTICITY
		LIQUID LIMIT LESS THAN 50		<b>CL</b>	INORGANIC CLAYS OF LOW TO MEDIUM PLASTICITY, GRAVELLY CLAYS, SANDY CLAYS, SILTY CLAYS, LEAN CLAYS
		LIQUID LIMIT LESS THAN 50		<b>OL</b>	ORGANIC SILTS AND ORGANIC SILTY CLAYS OF LOW PLASTICITY
	SILTS AND CLAYS	LIQUID LIMIT GREATER THAN 50		<b>MH</b>	INORGANIC SILTS, MICACEOUS OR DIATOMACEOUS SILTY SOILS
		LIQUID LIMIT GREATER THAN 50		<b>CH</b>	INORGANIC CLAYS OF HIGH PLASTICITY
		LIQUID LIMIT GREATER THAN 50		<b>OH</b>	ORGANIC CLAYS AND SILTS OF MEDIUM TO HIGH PLASTICITY
HIGHLY ORGANIC SOILS				<b>PT</b>	PEAT, HUMUS, SWAMP SOILS WITH HIGH ORGANIC CONTENTS

NOTE: Multiple symbols are used to indicate borderline or dual soil classifications

### Sampler Symbol Descriptions

	2.4-inch I.D. split barrel
	Standard Penetration Test (SPT)
	Shelby tube
	Piston
	Direct-Push
	Bulk or grab
	Continuous Coring

Blowcount is recorded for driven samplers as the number of blows required to advance sampler 12 inches (or distance noted). See exploration log for hammer weight and drop.

"P" indicates sampler pushed using the weight of the drill rig.

"WOH" indicates sampler pushed using the weight of the hammer.

NOTE: The reader must refer to the discussion in the report text and the logs of explorations for a proper understanding of subsurface conditions. Descriptions on the logs apply only at the specific exploration locations and at the time the explorations were made; they are not warranted to be representative of subsurface conditions at other locations or times.

## ADDITIONAL MATERIAL SYMBOLS

SYMBOLS		TYPICAL DESCRIPTIONS
GRAPH	LETTER	
	<b>AC</b>	Asphalt Concrete
	<b>CC</b>	Cement Concrete
	<b>CR</b>	Crushed Rock/ Quarry Spalls
	<b>SOD</b>	Sod/Forest Duff
	<b>TS</b>	Topsoil

### Groundwater Contact



Measured groundwater level in exploration, well, or piezometer



Measured free product in well or piezometer

### Graphic Log Contact

Distinct contact between soil strata

Approximate contact between soil strata

### Material Description Contact

Contact between geologic units

Contact between soil of the same geologic unit

### Laboratory / Field Tests

%F	Percent fines
%G	Percent gravel
AL	Atterberg limits
CA	Chemical analysis
CP	Laboratory compaction test
CS	Consolidation test
DD	Dry density
DS	Direct shear
HA	Hydrometer analysis
MC	Moisture content
MD	Moisture content and dry density
Mohs	Mohs hardness scale
OC	Organic content
PM	Permeability or hydraulic conductivity
PI	Plasticity index
PP	Pocket penetrometer
SA	Sieve analysis
TX	Triaxial compression
UC	Unconfined compression
VS	Vane shear

### Sheen Classification

NS	No Visible Sheen
SS	Slight Sheen
MS	Moderate Sheen
HS	Heavy Sheen

## Key to Exploration Logs

Start Drilled	10/5/2017	End	10/5/2017	Total Depth (ft)	20	Logged By	PDR	Driller	Holt Services, Inc.	Drilling Method	Direct-Push	
Checked By						DLC						
Surface Elevation (ft)	423.5			Hammer Data				Drilling Equipment	Geoprobe 7800			
Vertical Datum	NAVD88											
Easting (X)	1275754.574			System Datum	WA State Plane North			See "Remarks" section for groundwater observed				
Northing (Y)	119162.3868						NAD83					
Notes: Surface elevations pending from Sound Transit												

Elevation (feet)	FIELD DATA					Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor (ppm)	REMARKS
	Depth (feet)	Interval Recovered (in)	Blows/foot	Collected Sample	Sample Name Testing						
0	30				FL358-B1-0-0.5 FL358-B1-0.5-1 CA	AC	Asphalt concrete pavement	NS	<1	Groundwater observed at approximately 10½ feet below ground surface during drilling	
						SM	Brown silty fine to coarse sand with fine to coarse gravel (moist)	NS	<1		
						SP-SM	Gray fine to coarse sand with silt and fine to coarse gravel (moist)				
						SM	Gray fine to coarse sand with silt and fine to coarse gravel (moist)	NS	<1		
						NR	Brown silty fine to coarse sand with occasional fine gravel (moist)				
							No recovery				
4.20											
5	48				FL358-B1-5.6 CA	ML	Gray silt (moist)	NS	<1		
						SP-SM	Dark brown fine to coarse sand with silt and occasional fine gravel (moist)				
						ML	Brown silt with fine to medium sand and occasional fine gravel (moist)				
						NR	No recovery				
10	60				FL358-B1-10-11 CA	ML	Gray silt with fine sand (moist)	NS	<1		
						SM	Brown silty fine sand with occasional medium to coarse sand and fine gravel (wet)				
11.5											
14.0					FL358-B1-13-14 CA	SM	Grades to silty fine to coarse sand with fine to coarse gravel (wet)	NS	<1		
15	60										
						SP-SM	Brown fine to coarse sand with silt and fine to coarse gravel (wet)				
						SP	Brown fine to coarse sand with fine to coarse gravel and trace silt (wet)	NS	<1		
4.05											
20					FL358-B1-19-20			NS	<1		

Note: See Figure A-1 for explanation of symbols.  
Coordinates Data Source: Horizontal approximated based on hand-held GPS, Vertical approximated based on Locational Survey by Lin & Associates

### Log of Direct-Push Boring FL358-B1



Project: Sound Transit - Federal Way Link Extension FL358\_361\_363  
Project Location: 2200 S. 320th Street, Federal Way, Washington  
Project Number: 4082-039-01

Figure A-2  
Sheet 1 of 1

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Start Drilled	10/5/2017	End	10/5/2017	Total Depth (ft)	20	Logged By	PDR	Driller	Holt Services, Inc.	Drilling Method	Direct-Push
Surface Elevation (ft)	425.6			Hammer Data				Drilling Equipment	Geoprobe 7800		
Vertical Datum	NAVD88			System Datum	WA State Plane North NAD83			See "Remarks" section for groundwater observed			
Easting (X)	1275737.855										
Northing (Y)	118914.2593										
Notes: Surface elevations pending from Sound Transit											

Elevation (feet)	FIELD DATA					Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor (ppm)	REMARKS
	Depth (feet)	Interval Recovered (in)	Blows/foot	Collected Sample	Sample Name Testing						
425	0	36			FL358-B3-0.0.5 FL358-B3-0.5-1	AC SM SP-SM ML	Asphalt concrete pavement Brown silty fine to coarse sand with occasional gravel (moist) Gray fine to coarse sand with silt and gravel (moist) Gray silt with sand (moist to wet)	NS NS	<1 <1		
						SM NR	Brown silty fine to coarse sand with gravel (moist) No recovery				
420	5	42			FL358-B3-5.6 CA	SP-SM SM	Brown fine to coarse sand with silt and gravel (moist) Gray silty fine to medium sand with gravel (moist to wet)	SS	<1		
					FL358-B3-7.8 CA	NR	Becomes brown with increased silt content No recovery	NS	<1		
415	10	36			FL358-B3-12-13 CA	SM SP MH SP-SM NR	Brown silty fine to coarse sand (moist to wet) Gray-brown fine to coarse sand with gravel (moist) Brown organic silt with sand (moist) Gray fine to coarse sand with silt and gravel (moist) No recovery	NS 2.9 NS	<1 15.7	Groundwater observed at approximately 10 feet below ground surface during drilling	
						SM NR	Gray silty fine sand with occasional gravel (moist) No recovery	NS NS	<1 1.3		
410	15	36			FL358-B3-16.5-17.5	SP-SM SM NR	Brown fine to coarse sand with silt and gravel (moist) Gray silty fine to medium sand with occasional gravel (moist to wet) No recovery	SS -	1.4 <1		
						NR	No recovery				
20	20										

Note: See Figure A-1 for explanation of symbols.  
Coordinates Data Source: Horizontal approximated based on hand-held GPS, Vertical approximated based on Locational Survey by Lin & Associates

### Log of Direct-Push Boring FL358-B3

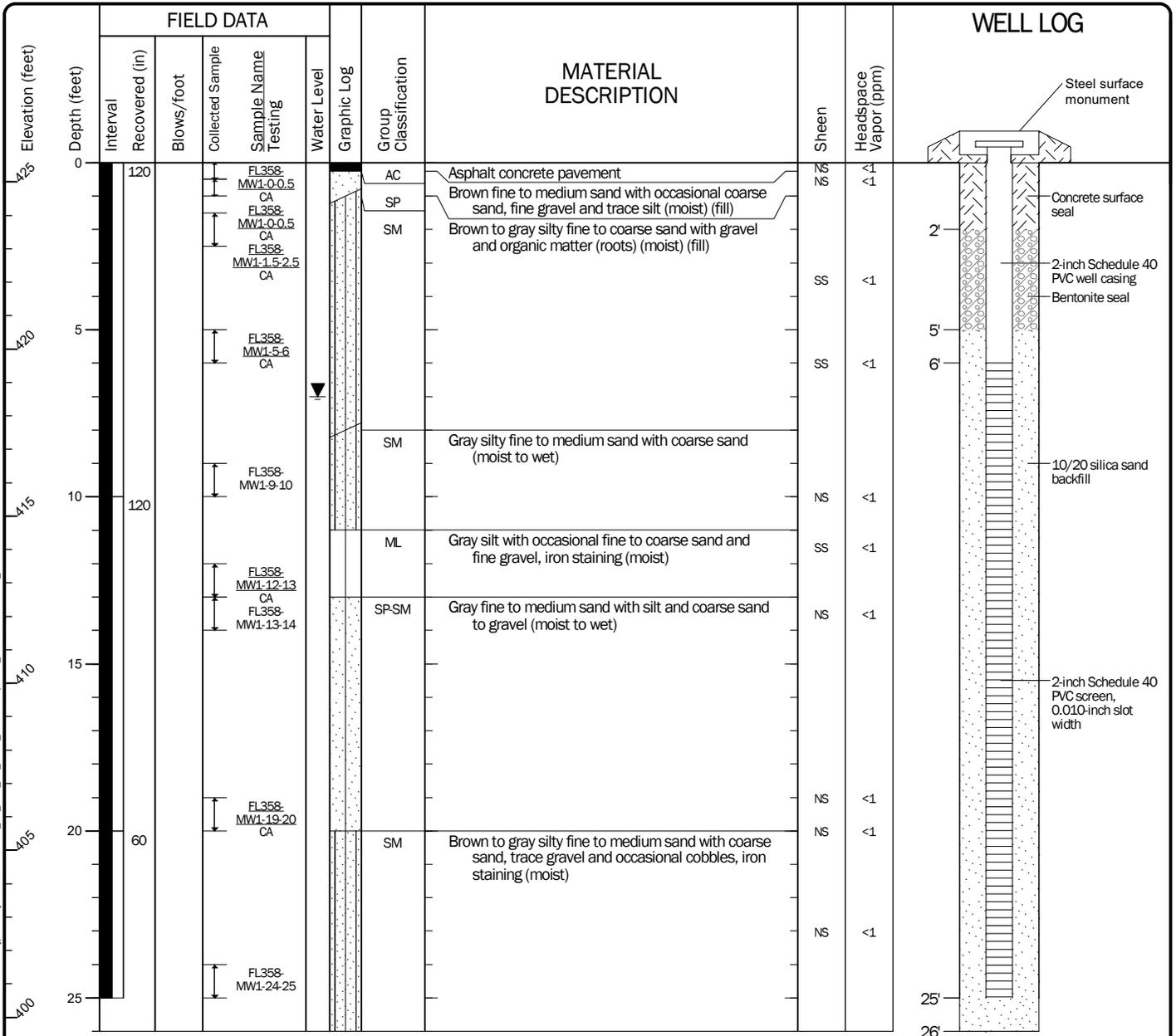


Project: Sound Transit - Federal Way Link Extension FL358\_361\_363  
Project Location: 2200 S. 320th Street, Federal Way, Washington  
Project Number: 4082-039-01

Figure A-3  
Sheet 1 of 1

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Start Drilled 10/2/2017	End 10/2/2017	Total Depth (ft) 26	Logged By Checked By DLC	Driller Holt Services, Inc.	Drilling Method Sonic
Hammer Data		Drilling Equipment Sonic Drill 1200 Terra Core		A 2 (in) well was installed on 10/2/2017 to a depth of 25 (ft).	
Surface Elevation (ft) Vertical Datum 425.58 NAVD88		Top of Casing Elevation (ft)		Groundwater Date Measured 10/6/2017	
Easting (X) Northing (Y) 1275784.189 119092.8266		Horizontal Datum WA State Plane North NAD83		Depth to Water (ft) 7.00 Elevation (ft) 418.58	
Notes: Surface elevations pending from Sound Transit					



Note: See Figure A-1 for explanation of symbols.  
Coordinates Data Source: Horizontal approximated based on hand-held GPS, Vertical approximated based on Locational Survey by Lin & Associates

### Log of Monitoring Well FL358-MW1

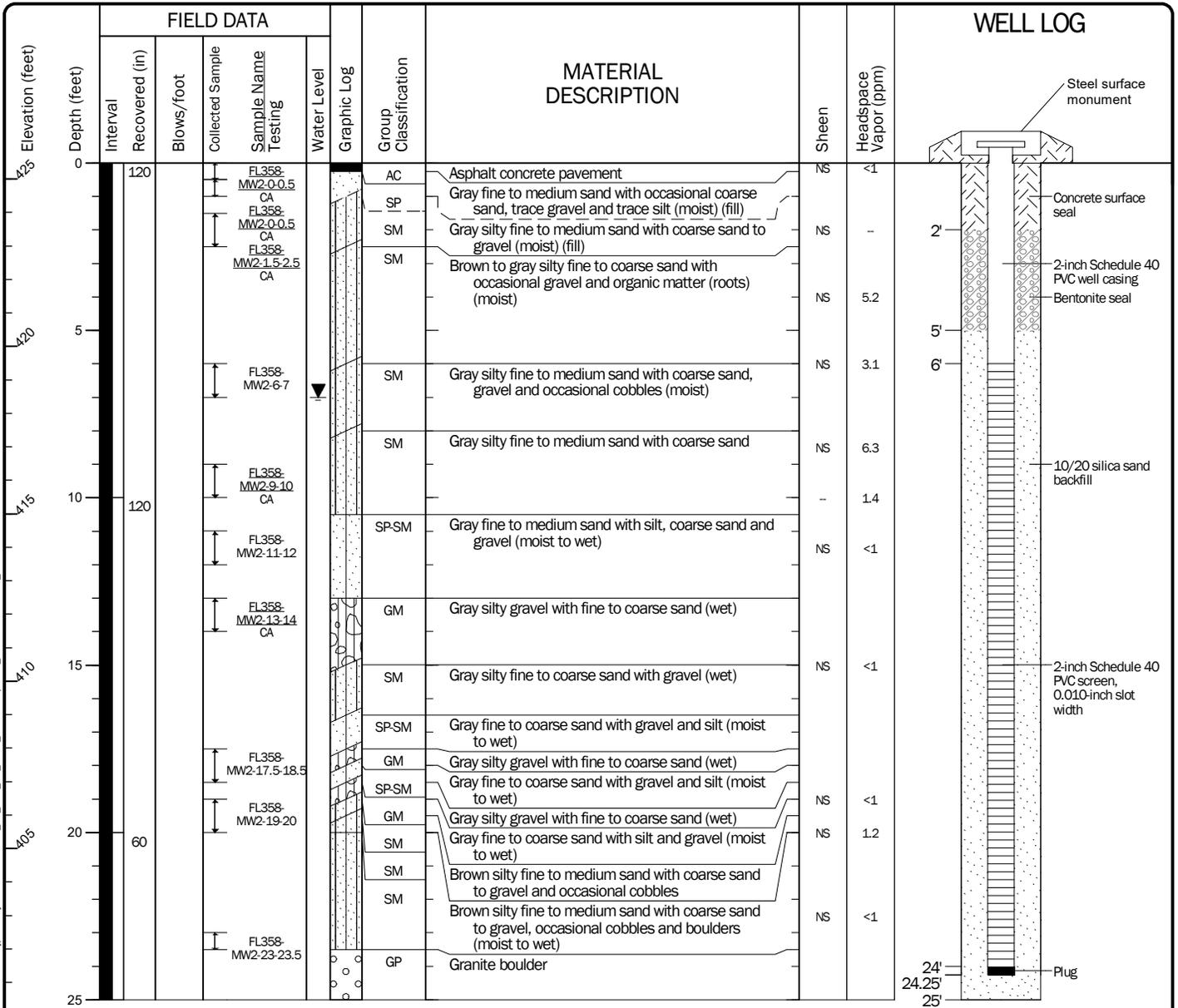


Project: Sound Transit - Federal Way Link Extension FL358\_361\_363  
Project Location: 2200 S. 320th Street, Federal Way, Washington  
Project Number: 4082-039-01

Figure A-4  
Sheet 1 of 1

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Start Drilled	10/2/2017	End	10/2/2017	Total Depth (ft)	25	Logged By	DLC	Checked By	DLC	Driller	Holt Services, Inc.	Drilling Method	Sonic	
Hammer Data						Drilling Equipment	Sonic Drill 1200 Terra Core			A 2 (in) well was installed on 10/2/2017 to a depth of 24 (ft).				
Surface Elevation (ft)	425.48		Vertical Datum		NAVD88	Top of Casing Elevation (ft)								
Easting (X)	1275778.104		Horizontal Datum		NA83	WA State Plane North		Groundwater Date Measured		10/6/2017	Depth to Water (ft)	7.00	Elevation (ft)	418.48
Notes:	Surface elevations pending from Sound Transit													



Note: See Figure A-1 for explanation of symbols.  
Coordinates Data Source: Horizontal approximated based on hand-held GPS, Vertical approximated based on Locational Survey by Lin & Associates

### Log of Monitoring Well FL358-MW2

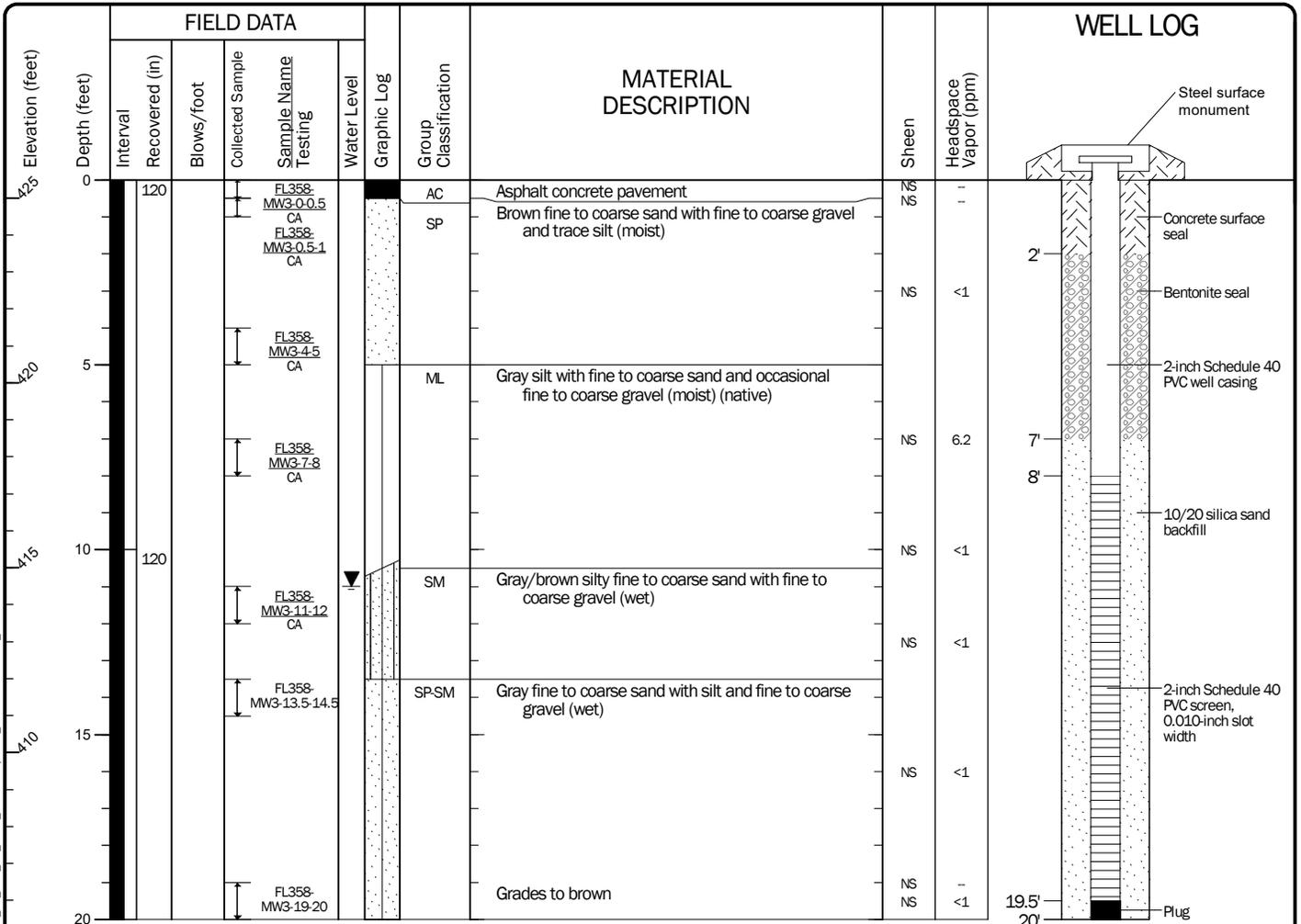


Project: Sound Transit - Federal Way Link Extension FL358\_361\_363  
Project Location: 2200 S. 320th Street, Federal Way, Washington  
Project Number: 4082-039-01

Figure A-5  
Sheet 1 of 1

Date: 11/28/17 Path: W:\PROJECTS\4082039\GINT\4082039\ENV LOGS\GPI DBLibrary\Library\GEOENGINEERS\_DF\_STD\_US\_JUNE\_2017\GLB\ENVIRONMENTAL\_WELL

Start Drilled 10/3/2017	End 10/3/2017	Total Depth (ft) 20	Logged By Checked By PDR DLC	Driller Holt Services, Inc.	Drilling Method Sonic
Hammer Data		Drilling Equipment Sonic Drill 1200 Terra Core			A 2 (in) well was installed on 10/3/2017 to a depth of 19.5 (ft).
Surface Elevation (ft) Vertical Datum 425.49 NAVD88		Top of Casing Elevation (ft)			
Easting (X) Northing (Y) 1275732.324 118973.0768		Horizontal Datum WA State Plane North NAD83		Groundwater Date Measured 10/3/2017	Depth to Water (ft) 11.00 Elevation (ft) 414.49
Notes: Surface elevations pending from Sound Transit					



Note: See Figure A-1 for explanation of symbols.  
Coordinates Data Source: Horizontal approximated based on hand-held GPS, Vertical approximated based on Locational Survey by Lin & Associates

### Log of Monitoring Well FL358-MW3

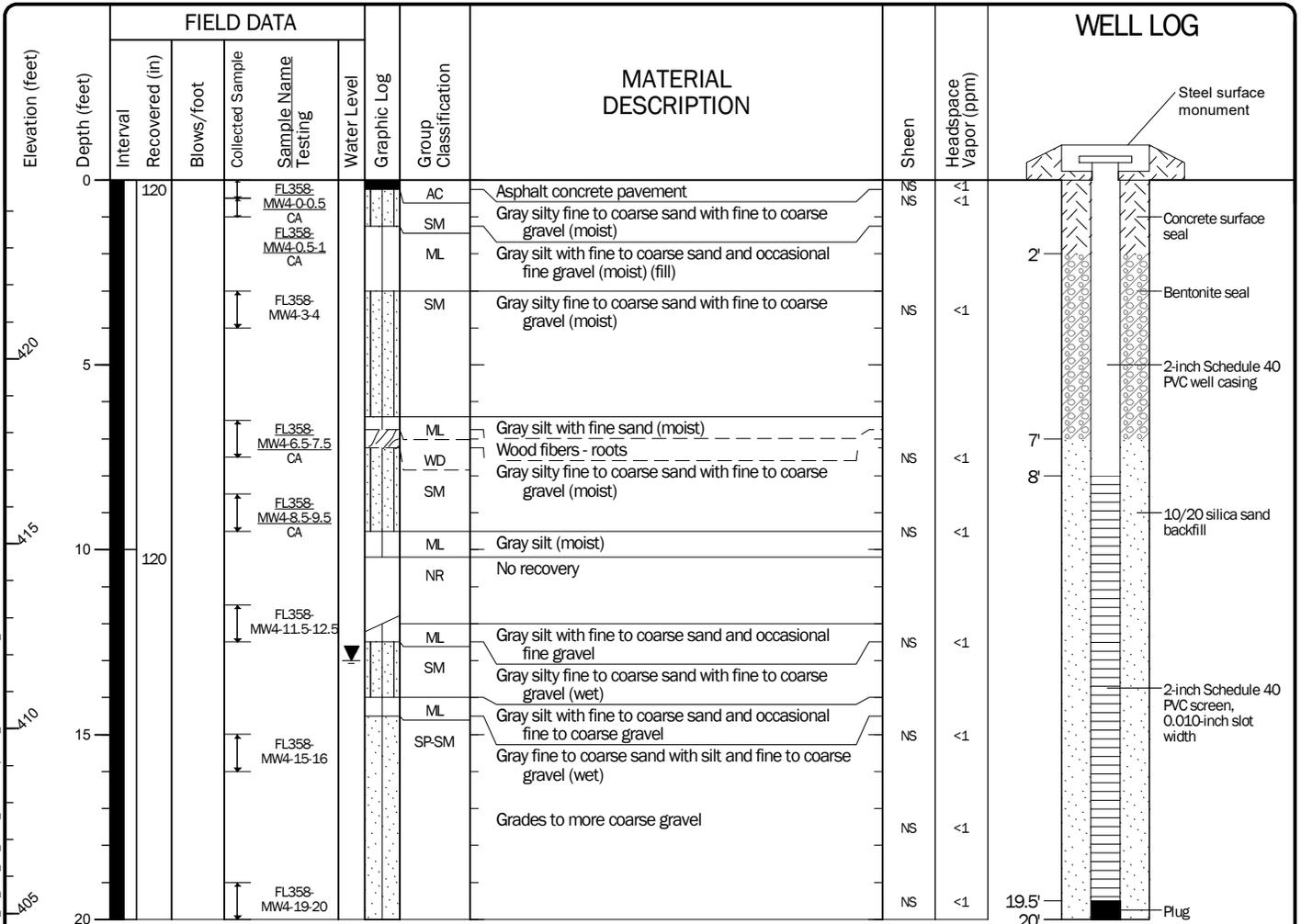


Project: Sound Transit - Federal Way Link Extension FL358\_361\_363  
Project Location: 2200 S. 320th Street, Federal Way, Washington  
Project Number: 4082-039-01

Figure A-6  
Sheet 1 of 1

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Start Drilled 10/3/2017	End 10/3/2017	Total Depth (ft)	20	Logged By Checked By	PDR DLC	Driller Holt Services, Inc.	Drilling Method	Sonic
Hammer Data				Drilling Equipment			Sonic Drill 1200 Terra Core	
Surface Elevation (ft) Vertical Datum				424.84 NAVD88			A 2 (in) well was installed on 10/3/2017 to a depth of 19.5 (ft).	
Easting (X) Northing (Y)				1275650.153 118921.5743			Horizontal Datum	
				WA State Plane North NAD83			Groundwater Date Measured	
							10/3/2017	
							Depth to Water (ft)	
							13.00	
							Elevation (ft)	
							411.84	
Notes: Surface elevations pending from Sound Transit								



Note: See Figure A-1 for explanation of symbols.  
Coordinates Data Source: Horizontal approximated based on hand-held GPS, Vertical approximated based on Locational Survey by Lin & Associates

### Log of Monitoring Well FL358-MW4



Project: Sound Transit - Federal Way Link Extension FL358\_361\_363  
Project Location: 2200 S. 320th Street, Federal Way, Washington  
Project Number: 4082-039-01

Figure A-7  
Sheet 1 of 1

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Start Drilled	10/4/2017	End	10/4/2017	Total Depth (ft)	20	Logged By	PDR	Driller	Holt Services, Inc.	Drilling Method	Direct-Push
Checked By		DLC									
Surface Elevation (ft)	418.66		Vertical Datum	NAVD88		Hammer Data	Drilling Equipment Geoprobe 7800				
Easting (X)	1275346.224		System Datum	WA State Plane North NAD83		See "Remarks" section for groundwater observed					
Northing (Y)	118670.642										
Notes: Surface elevations pending from Sound Transit											

Elevation (feet)	FIELD DATA					Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor (ppm)	REMARKS
	Depth (feet)	Interval Recovered (in)	Blows/foot	Collected Sample	Sample Name Testing						
0	18	CA		FL363-B4-0.5	AC	Asphalt concrete pavement	NS	<1			
		CA		FL363-B4-0.5-1	SP-SM	Gray fine to coarse sand with silt (moist)	NS	<1			
					SM	Gray silty fine to coarse sand with occasional fine gravel (moist)					
					NR	No recovery					
4.15											
5	40				SM	Gray silty fine to medium sand with occasional coarse sand and fine gravel (moist)	NS	<1			
					SP-SM	Gray fine to coarse sand with silt, fine gravel and occasional coarse gravel (moist)					
		CA		FL363-B4-7-8	SP-SM	Dark brown fine to coarse sand with silt and occasional fine gravel (moist)	NS	<1			
						Increasing silt					
					NR	No recovery					
10	36	CA		FL363-B4-11-12	SM	Gray silty fine to medium sand with fine gravel (moist)	NS	26.3			
		CA		FL363-B4-12-13	SM	Mottled gray/orange silt lens with coarse gravel and sand (moist)	NS	376.2			
						Gray silty fine to medium sand with fine gravel (moist)					
					NR	No recovery					
15	48	CA		FL363-B4-17-18	SM	Gray silty fine to coarse sand with occasional coarse sand (wet)	NS	64.1		Groundwater observed at approximately 15 feet at time of drilling	
						Medium sand content increases					
20							NS	1.3			

Note: See Figure A-1 for explanation of symbols.  
Coordinates Data Source: Horizontal approximated based on hand-held GPS, Vertical approximated based on Locational Survey by Lin & Associates

### Log of Direct-Push Boring FL363-B4



Project: Sound Transit - Federal Way Link Extension FL358\_361\_363  
Project Location: 2200 S. 320th Street, Federal Way, Washington  
Project Number: 4082-039-01

Figure A-8  
Sheet 1 of 1

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Start Drilled	10/4/2017	End	10/4/2017	Total Depth (ft)	20	Logged By	PDR	Driller	Holt Services, Inc.	Drilling Method	Direct-Push
Checked By						DLC					
Surface Elevation (ft)	422.34			Hammer Data				Drilling Equipment	Geoprobe 7800		
Vertical Datum	NAVD88										
Easting (X)	1275433.997			System Datum	WA State Plane North			See "Remarks" section for groundwater observed			
Northing (Y)	118632.1434						NAD83				
Notes: Surface elevations pending from Sound Transit											

Elevation (feet)	FIELD DATA					MATERIAL DESCRIPTION	Sheen	Headspace Vapor (ppm)	REMARKS	
	Depth (feet)	Interval Recovered (in)	Blows/foot	Collected Sample	Sample Name Testing					Graphic Log
420	0	40			FL363-B5-0-0.5 CA	AC	SP-SM	NS	<1	Groundwater observed at approximately 10 feet at time of drilling
					FL363-B5-0.5-1 CA	SP-SM	SP-SM	NS	<1	
						NR	NR	NS	<1	
	5	18			FL363-B5-5.5-6.5 CA	SP-SM	NR	NS	1.5	
415						NR	NR			
	10	40			FL363-B5-11.5-12.5 CA	SP-SM	SM	-	77.8	
410						NR	NR	-	171.2	
						NR	NR	-	302.6	
	15	60			FL363-B5-17-18 CA	SP	SM	-	44.3	
405						SP	SM	-	10.6	
	20					SM	SM	-	1.4	

Note: See Figure A-1 for explanation of symbols.  
Coordinates Data Source: Horizontal approximated based on hand-held GPS, Vertical approximated based on Locational Survey by Lin & Associates

### Log of Direct-Push Boring FL363-B5



Project: Sound Transit - Federal Way Link Extension FL358\_361\_363  
Project Location: 2200 S. 320th Street, Federal Way, Washington  
Project Number: 4082-039-01

Figure A-9  
Sheet 1 of 1

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Drilled	Start 10/4/2017	End 10/4/2017	Total Depth (ft)	20	Logged By Checked By	PDR DLC	Driller Holt Services, Inc.	Drilling Method	Direct-Push
Surface Elevation (ft) Vertical Datum	424.29 NAVD88		Hammer Data			Drilling Equipment Geoprobe 7800			
Easting (X) Northing (Y)	1275529.857 118616.3787		System Datum WA State Plane North NAD83			See "Remarks" section for groundwater observed			
Notes: Surface elevations pending from Sound Transit									

Elevation (feet)	FIELD DATA					Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor (ppm)	REMARKS
	Depth (feet)	Interval Recovered (in)	Blows/foot	Collected Sample	Sample Name Testing						
0	18				FL363-B6-0.0.5 FL363-B6-0.5-1	SP SPSM NR	Asphalt concrete pavement Brown fine to coarse sand with trace silt and fine gravel Gray fine to coarse sand with silt, fine gravel and occasional coarse gravel (moist) No recovery	NS NS NS	<1 <1 <1	Groundwater observed at approximately 12 feet at time of drilling	
5	24			FL363-B6-6-7 CA	SPSM NR	Gray fine to coarse sand with silt, fine gravel and occasional coarse gravel (moist) No recovery	NS NS	<1 <1			
10	48			FL363-B6-11-12 CA	SPSM MH SM ML NR	Gray fine to coarse sand with silt, fine gravel and occasional coarse gravel (moist) Dark brown organic silt with fine sand and organic matter (roots) (moist) Gray silty fine to coarse sand (wet) Green-gray silt with sand and occasional fine gravel (moist) No recovery	NS NS NS NS	<1 <1 <1 <1			
15	36			FL363-B6-17-18 CA	SM NR	Brown silty fine to coarse sand with fine gravel (moist) Medium sand increases No recovery	NS NS	- -			

Note: See Figure A-1 for explanation of symbols.  
Coordinates Data Source: Horizontal approximated based on hand-held GPS, Vertical approximated based on Locational Survey by Lin & Associates

### Log of Direct-Push Boring FL363-B6



Project: Sound Transit - Federal Way Link Extension FL358\_361\_363  
Project Location: 2200 S. 320th Street, Federal Way, Washington  
Project Number: 4082-039-01

Figure A-10  
Sheet 1 of 1

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Start Drilled	10/4/2017	End	10/4/2017	Total Depth (ft)	20	Logged By	PDR	Driller	Holt Services, Inc.	Drilling Method	Direct-Push
Surface Elevation (ft)	423.62			Hammer Data				Drilling Equipment	Geoprobe 7800		
Vertical Datum	NAVD88			System Datum	WA State Plane North NAD83			See "Remarks" section for groundwater observed			
Easting (X)	1275532.102										
Northing (Y)	118542.3638										
Notes: Surface elevations pending from Sound Transit											

Elevation (feet)	FIELD DATA					Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor (ppm)	REMARKS
	Depth (feet)	Interval Recovered (in)	Blows/foot	Collected Sample	Sample Name Testing						
0	36				FL363-B7-0-0.5 CA	AC	Asphalt concrete pavement	NS	<1		
					FL363-B7-0.5-1 CA	SP	Brown fine to coarse sand with fine to coarse gravel and trace silt (moist)				
						SM	Gray silty fine to coarse sand with fine gravel and occasional coarse gravel (moist)				
						ML	Dark brown silt with fine to coarse sand, occasional gravel and organic matter (wood) (roots) (moist)	NS	<1		
4.20						NR	No recovery				
	30				FL363-B7-6-7 CA	SPSM	Red-brown fine to coarse sand with silt and fine gravel (moist)	NS	<1		
						SM	Gray silty fine to medium sand with coarse sand and fine to coarse gravel (moist)	NS	<1		
4.15						NR	No recovery				
	24				FL363-B7-10-11 CA	SPSM	Gray fine to coarse sand with silt (wet)	NS	<1	Groundwater observed at approximately 10 feet at time of drilling	
4.10						NR	No recovery				
	36				FL363-B7-17-18 CA	SPSM	Gray fine to coarse sand with silt (wet)	NS	<1		
4.05							Becomes moist	NS	<1		
20											

Note: See Figure A-1 for explanation of symbols.

Coordinates Data Source: Horizontal approximated based on hand-held GPS, Vertical approximated based on Locational Survey by Lin & Associates

### Log of Direct-Push Boring FL363-B7



Project: Sound Transit - Federal Way Link Extension FL358\_361\_363  
 Project Location: 2200 S. 320th Street, Federal Way, Washington  
 Project Number: 4082-039-01

Figure A-11  
 Sheet 1 of 1

Date: 11/28/17 Path: W:\PROJECTS\4082039\GINT\408203901 ENV LOGS.GPJ DBLibrary\Library\GEOENGINEERS\_DF\_STD\_US\_JUNE\_2017.GLB\GEB8\_ENVIRONMENTAL\_STANDARD\_NO\_GW



Photograph 1 – FL358-MW1 boring location in the northeast corner of the property outside the former Y Pay Mor Dry Cleaner space. View to northwest.



Photograph 2 – FL358-MW2 boring location in the northeast corner of the property outside the former Y Pay Mor Dry Cleaner space. View to south.

FL358/FL361/FL363 Site Photographs - October 2017  
2200 S. 320th Street, Federal Way, WA

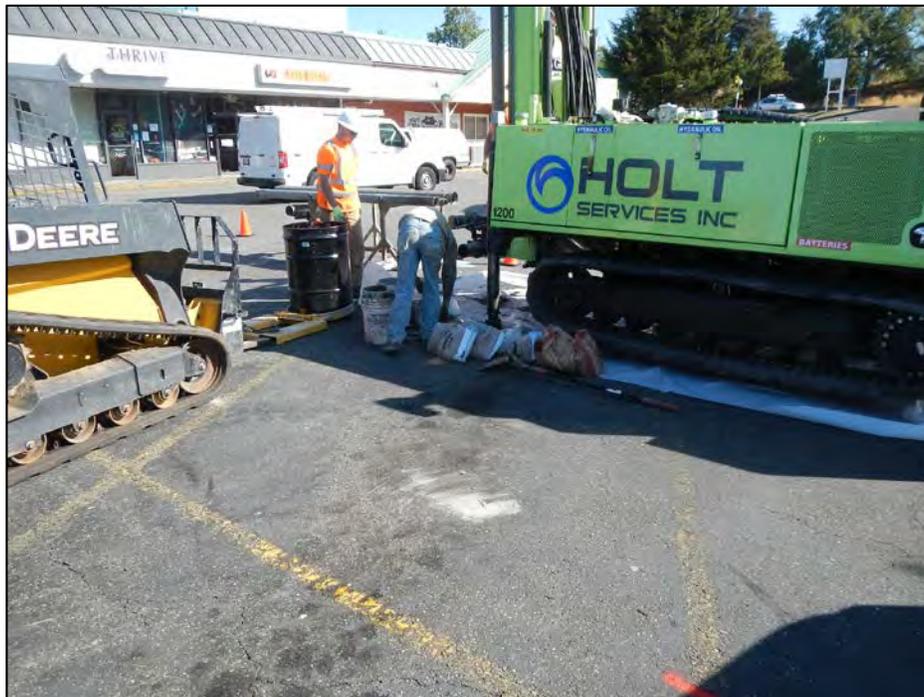
Phase II Environmental Site Assessment  
Federal Way Link Extension  
Federal Way, Washington



Figure A-12



Photograph 3 – FL358-MW3 boring location (in front of drill rig – see arrow) located near the southeast corner of the shopping center, south of the former Y Pay Mor Dry Cleaner space. View to west.



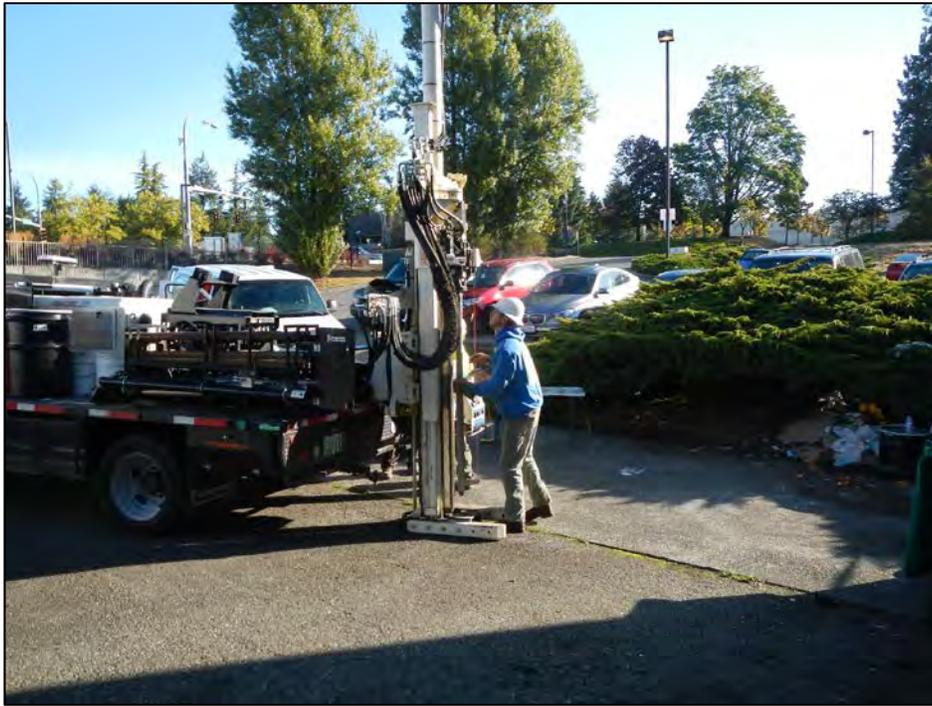
Photograph 4 – FL358-MW4 boring location in the parking lot south of the former Y Pay Mor Dry Cleaner space. View to northeast.

FL358/FL361/FL363 Site Photographs - October 2017  
2200 S. 320th Street, Federal Way, WA

Phase II Environmental Site Assessment  
Federal Way Link Extension  
Federal Way, Washington



Figure A-13



Photograph 5 - FL358 -B1 boring location near the northeast corner of the property, outside to the north of the former Y Pay Mor Dry Cleaner space. View to northeast.



Photograph 6 - FL363-B3 boring location in eastern portion of the property, north of Wendy's Restaurant. View to north.

FL358/FL361/FL363 Site Photographs - October 2017  
2200 S. 320th Street, Federal Way, WA

Phase II Environmental Site Assessment  
Federal Way Link Extension  
Federal Way, Washington



Figure A-14



Photograph 7 - FL363-B4 boring location in southern portion of shopping center mall parking lot, northwest of the ARCO. View to west.



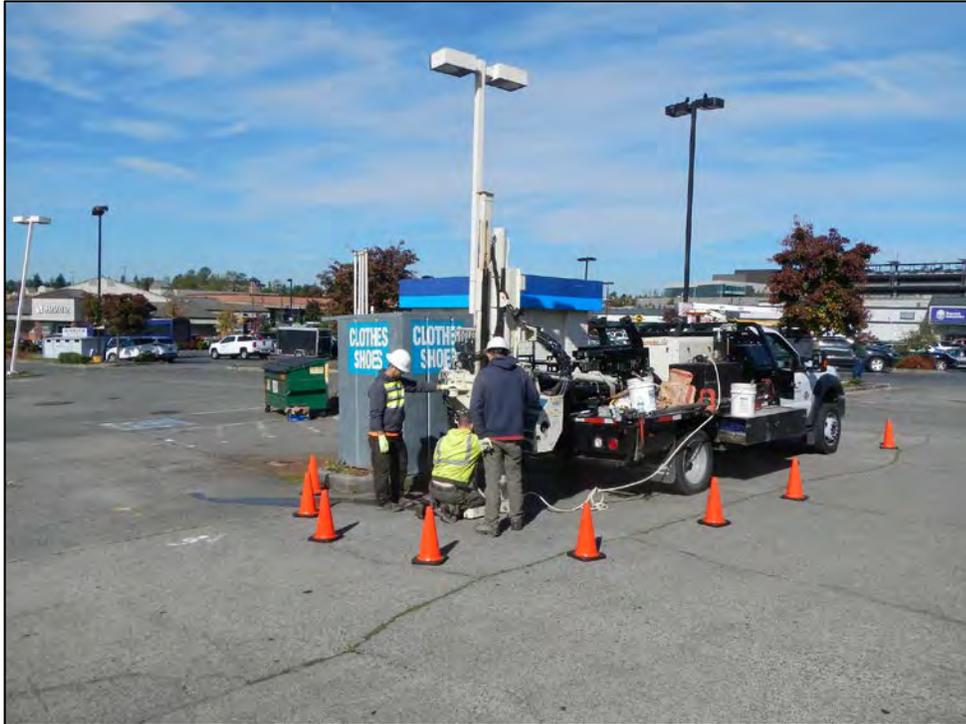
Photograph 8 - FL363-B5 location in shopping center access road north of the ARCO. View to north.

FL358/FL361/FL363 Site Photographs - October 2017  
2200 S. 320th Street, Federal Way, WA

Phase II Environmental Site Assessment  
Federal Way Link Extension  
Federal Way, Washington



Figure A-15



Photograph 9 – FL363-B6 boring location in shopping center access road, east of the ARCO. View to northwest.



Photograph 10 - FL363-B7 boring location to the east of the ARCO service station. View to north/northwest.

FL358/FL361/FL363 Site Photographs - October 2017  
2200 S. 320th Street, Federal Way, WA

Phase II Environmental Site Assessment  
Federal Way Link Extension  
Federal Way, Washington



Figure A-16



Photograph 9 –Phase II ESA drum storage location northeast of the shopping center building on FL358.

004082-039-01 Date: 10/25/2017

FL358/FL361/FL363 Site Photographs - October 2017  
2200 S. 320th Street, Federal Way, WA

Phase II Environmental Site Assessment  
Federal Way Link Extension  
Federal Way, Washington

**GEOENGINEERS** 

Figure A-17

**APPENDIX B**  
**CHEMICAL ANALYTICAL PROGRAM**

# APPENDIX B

## CHEMICAL ANALYTICAL DATA

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### Analytical Methods

Chain-of-custody procedures were followed during the transport of the soil samples to the analytical laboratory. The samples were held in cold storage pending extraction and/or analysis. The analytical results, analytical methods reference and laboratory quality control (QC) records are included in this appendix. The analytical results are also summarized in the text and tables of this report.

### Analytical Data Review

The laboratory maintains an internal quality assurance program as documented in its laboratory quality assurance manual. The laboratory uses a combination of blanks, surrogate recoveries, duplicates, matrix spike recoveries, matrix spike duplicate recoveries, blank spike recoveries and blank spike duplicate recoveries to evaluate the validity of the analytical results. The laboratory also uses data quality goals for individual chemicals or groups of chemicals based on the long-term performance of the test methods. The data quality goals were included in the laboratory reports. The laboratory compared each group of samples with the existing data quality goals and noted any exceptions in the laboratory report. Data quality exceptions documented by the accredited laboratory were reviewed by GeoEngineers and are addressed in the data quality exception section of this appendix.

### QC Sample Summary

Results for the FL358-MW3 groundwater sample and its field duplicate obtained on October 9, 2017 were similar (VOCs were non-detect in both samples, see Table 2).

An equipment rinsate blank was collected on October 9, 2017 and analyzed for VOCs. The sample was collected using distilled water run through the polyethylene tubing used for sampling. No VOCs were detected in the equipment rinsate blank (see Laboratory Report 1710-105).

### Analytical Data Review Summary

No data quality exceptions were noted during our review of the Y Pay Mor Phase II ESA data.

The following data quality exceptions were noted during our review of the Phase II ESA data related to ARCO:

#### Lab Report 1710-062

- VOC 8260C analysis: Surrogate standard toluene-d8 was outside control limits on the high end for sample FL363-B4-7-8 due to co-eluting non-target analytes.

- VOC 8260C analysis: Some MTCA Method A cleanup level reporting limits were non-achievable for samples FL363-B4-11-12, FL363-B4-12-13 and FL363-B5-11.5-12.5 due to dilution necessary for sample analysis.

Lab Report 1710-062

- PAH EPA 8270D/SIM analysis: Sample FL363-B7-W (water) had one surrogate recovery out of control limits. This is within the allowance of laboratory standard operating procedure as long as the recovery is above 10 percent.
- VOC 8260C analysis: The naphthalenes result of 160 µg/l should be considered an estimate as the calibration verification for this analyte exceeded the 20 percent drift specific by the method. The overall performance of the calibration verification standard met the acceptance criteria of the method.

Based on our data quality review, it is our opinion that the qualifiers listed for the samples above are not significant with regard to the use of the data for characterization purposes. The samples/results were considered of acceptable quality for their intended use in this report.



14648 NE 95<sup>th</sup> Street, Redmond, WA 98052 • (425) 883-3881

October 19, 2017

Marsi Beeson  
GeoEngineers, Inc.  
12000 NW Naito Prkway, Suite 180  
Portland, OR 97209

Re: Analytical Data for Project 4082-039-01  
Laboratory Reference No. 1710-072

Dear Marsi:

Enclosed are the analytical results and associated quality control data for samples submitted on October 5, 2017.

The standard policy of OnSite Environmental, Inc. is to store your samples for 30 days from the date of receipt. If you require longer storage, please contact the laboratory.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning the data, or need additional information, please feel free to call me.

Sincerely,

A handwritten signature in black ink, appearing to read "DB", with a long horizontal stroke extending to the right.

David Baumeister  
Project Manager

Enclosures



---

OnSite Environmental, Inc. 14648 NE 95<sup>th</sup> Street, Redmond, WA 98052 (425) 883-3881

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: October 19, 2017  
Samples Submitted: October 5, 2017  
Laboratory Reference: 1710-072  
Project: 4082-039-01

### Case Narrative

Samples were collected on October 5, 2017 and received by the laboratory on October 5, 2017. They were maintained at the laboratory at a temperature of 2°C to 6°C.

Please note that any and all soil sample results are reported on a dry-weight basis, unless otherwise noted below.

General QA/QC issues associated with the analytical data enclosed in this laboratory report will be indicated with a reference to a comment or explanation on the Data Qualifier page. More complex and involved QA/QC issues will be discussed in detail below.



Date of Report: October 19, 2017  
Samples Submitted: October 5, 2017  
Laboratory Reference: 1710-072  
Project: 4082-039-01

### ANALYTICAL REPORT FOR SAMPLES

Client ID	Laboratory ID	Matrix	Date Sampled	Date Received	Notes
FL358-B3-0-0.5	10-072-01	Soil	10-5-17	10-5-17	
FL358-B3-0.5-1	10-072-02	Soil	10-5-17	10-5-17	
FL358-B3-5-6	10-072-03	Soil	10-5-17	10-5-17	
FL358-B3-7-8	10-072-04	Soil	10-5-17	10-5-17	
FL358-B3-12-13	10-072-05	Soil	10-5-17	10-5-17	
FL358-B1-0.5-1	10-072-08	Soil	10-5-17	10-5-17	
FL358-B1-5-6	10-072-09	Soil	10-5-17	10-5-17	
FL358-B1-10-11	10-072-10	Soil	10-5-17	10-5-17	
FL358-B1-13-14	10-072-11	Soil	10-5-17	10-5-17	



Date of Report: October 19, 2017  
 Samples Submitted: October 5, 2017  
 Laboratory Reference: 1710-072  
 Project: 4082-039-01

**VOLATILES EPA 8260C**  
 page 1 of 2

Matrix: Soil  
 Units: mg/kg

<b>Analyte</b>	<b>Result</b>	<b>PQL</b>	<b>Method</b>	<b>Date Prepared</b>	<b>Date Analyzed</b>	<b>Flags</b>
<b>Client ID:</b>	<b>FL358-B3-5-6</b>					
Laboratory ID:	10-072-03					
Dichlorodifluoromethane	ND	0.0023	EPA 8260C	10-11-17	10-11-17	
Chloromethane	ND	0.0066	EPA 8260C	10-11-17	10-11-17	
Vinyl Chloride	ND	0.00098	EPA 8260C	10-11-17	10-11-17	
Bromomethane	ND	0.00098	EPA 8260C	10-11-17	10-11-17	
Chloroethane	ND	0.0049	EPA 8260C	10-11-17	10-11-17	
Trichlorofluoromethane	ND	0.00098	EPA 8260C	10-11-17	10-11-17	
1,1-Dichloroethene	ND	0.00098	EPA 8260C	10-11-17	10-11-17	
Acetone	0.058	0.0049	EPA 8260C	10-11-17	10-11-17	
Iodomethane	ND	0.0072	EPA 8260C	10-11-17	10-11-17	
Carbon Disulfide	ND	0.00098	EPA 8260C	10-11-17	10-11-17	
Methylene Chloride	ND	0.0049	EPA 8260C	10-11-17	10-11-17	
(trans) 1,2-Dichloroethene	ND	0.00098	EPA 8260C	10-11-17	10-11-17	
Methyl t-Butyl Ether	ND	0.00098	EPA 8260C	10-11-17	10-11-17	
1,1-Dichloroethane	ND	0.00098	EPA 8260C	10-11-17	10-11-17	
Vinyl Acetate	ND	0.0049	EPA 8260C	10-11-17	10-11-17	
2,2-Dichloropropane	ND	0.00098	EPA 8260C	10-11-17	10-11-17	
(cis) 1,2-Dichloroethene	ND	0.00098	EPA 8260C	10-11-17	10-11-17	
2-Butanone	0.0074	0.0049	EPA 8260C	10-11-17	10-11-17	
Bromochloromethane	ND	0.00098	EPA 8260C	10-11-17	10-11-17	
Chloroform	ND	0.00098	EPA 8260C	10-11-17	10-11-17	
1,1,1-Trichloroethane	ND	0.00098	EPA 8260C	10-11-17	10-11-17	
Carbon Tetrachloride	ND	0.00098	EPA 8260C	10-11-17	10-11-17	
1,1-Dichloropropene	ND	0.00098	EPA 8260C	10-11-17	10-11-17	
Benzene	ND	0.00098	EPA 8260C	10-11-17	10-11-17	
1,2-Dichloroethane	ND	0.00098	EPA 8260C	10-11-17	10-11-17	
Trichloroethene	ND	0.00098	EPA 8260C	10-11-17	10-11-17	
1,2-Dichloropropane	ND	0.00098	EPA 8260C	10-11-17	10-11-17	
Dibromomethane	ND	0.00098	EPA 8260C	10-11-17	10-11-17	
Bromodichloromethane	ND	0.00098	EPA 8260C	10-11-17	10-11-17	
2-Chloroethyl Vinyl Ether	ND	0.0049	EPA 8260C	10-11-17	10-11-17	
(cis) 1,3-Dichloropropene	ND	0.00098	EPA 8260C	10-11-17	10-11-17	
Methyl Isobutyl Ketone	ND	0.0049	EPA 8260C	10-11-17	10-11-17	
Toluene	ND	0.0049	EPA 8260C	10-11-17	10-11-17	
(trans) 1,3-Dichloropropene	ND	0.00098	EPA 8260C	10-11-17	10-11-17	



Date of Report: October 19, 2017  
 Samples Submitted: October 5, 2017  
 Laboratory Reference: 1710-072  
 Project: 4082-039-01

**VOLATILES EPA 8260C**  
 page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>FL358-B3-5-6</b>					
Laboratory ID:	10-072-03					
1,1,2-Trichloroethane	ND	0.00098	EPA 8260C	10-11-17	10-11-17	
Tetrachloroethene	ND	0.00098	EPA 8260C	10-11-17	10-11-17	
1,3-Dichloropropane	ND	0.00098	EPA 8260C	10-11-17	10-11-17	
2-Hexanone	ND	0.0049	EPA 8260C	10-11-17	10-11-17	
Dibromochloromethane	ND	0.00098	EPA 8260C	10-11-17	10-11-17	
1,2-Dibromoethane	ND	0.00098	EPA 8260C	10-11-17	10-11-17	
Chlorobenzene	ND	0.00098	EPA 8260C	10-11-17	10-11-17	
1,1,1,2-Tetrachloroethane	ND	0.00098	EPA 8260C	10-11-17	10-11-17	
Ethylbenzene	ND	0.00098	EPA 8260C	10-11-17	10-11-17	
m,p-Xylene	ND	0.0020	EPA 8260C	10-11-17	10-11-17	
o-Xylene	ND	0.00098	EPA 8260C	10-11-17	10-11-17	
Styrene	ND	0.00098	EPA 8260C	10-11-17	10-11-17	
Bromoform	ND	0.0049	EPA 8260C	10-11-17	10-11-17	
Isopropylbenzene	ND	0.00098	EPA 8260C	10-11-17	10-11-17	
Bromobenzene	ND	0.00098	EPA 8260C	10-11-17	10-11-17	
1,1,2,2-Tetrachloroethane	ND	0.00098	EPA 8260C	10-11-17	10-11-17	
1,2,3-Trichloropropane	ND	0.00098	EPA 8260C	10-11-17	10-11-17	
n-Propylbenzene	ND	0.00098	EPA 8260C	10-11-17	10-11-17	
2-Chlorotoluene	ND	0.00098	EPA 8260C	10-11-17	10-11-17	
4-Chlorotoluene	ND	0.00098	EPA 8260C	10-11-17	10-11-17	
1,3,5-Trimethylbenzene	ND	0.00098	EPA 8260C	10-11-17	10-11-17	
tert-Butylbenzene	ND	0.00098	EPA 8260C	10-11-17	10-11-17	
1,2,4-Trimethylbenzene	ND	0.00098	EPA 8260C	10-11-17	10-11-17	
sec-Butylbenzene	ND	0.00098	EPA 8260C	10-11-17	10-11-17	
1,3-Dichlorobenzene	ND	0.00098	EPA 8260C	10-11-17	10-11-17	
p-Isopropyltoluene	ND	0.00098	EPA 8260C	10-11-17	10-11-17	
1,4-Dichlorobenzene	ND	0.00098	EPA 8260C	10-11-17	10-11-17	
1,2-Dichlorobenzene	ND	0.00098	EPA 8260C	10-11-17	10-11-17	
n-Butylbenzene	ND	0.00098	EPA 8260C	10-11-17	10-11-17	
1,2-Dibromo-3-chloropropane	ND	0.0049	EPA 8260C	10-11-17	10-11-17	
1,2,4-Trichlorobenzene	ND	0.00098	EPA 8260C	10-11-17	10-11-17	
Hexachlorobutadiene	ND	0.0049	EPA 8260C	10-11-17	10-11-17	
Naphthalene	ND	0.00098	EPA 8260C	10-11-17	10-11-17	
1,2,3-Trichlorobenzene	ND	0.00098	EPA 8260C	10-11-17	10-11-17	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>115</i>	<i>73-134</i>				
<i>Toluene-d8</i>	<i>109</i>	<i>81-124</i>				
<i>4-Bromofluorobenzene</i>	<i>102</i>	<i>80-131</i>				



Date of Report: October 19, 2017  
 Samples Submitted: October 5, 2017  
 Laboratory Reference: 1710-072  
 Project: 4082-039-01

**VOLATILES EPA 8260C**  
 page 1 of 2

Matrix: Soil  
 Units: mg/kg

<b>Analyte</b>	<b>Result</b>	<b>PQL</b>	<b>Method</b>	<b>Date Prepared</b>	<b>Date Analyzed</b>	<b>Flags</b>
<b>Client ID:</b>	<b>FL358-B3-7-8</b>					
Laboratory ID:	10-072-04					
Dichlorodifluoromethane	ND	0.0028	EPA 8260C	10-11-17	10-11-17	
Chloromethane	ND	0.0080	EPA 8260C	10-11-17	10-11-17	
Vinyl Chloride	ND	0.0012	EPA 8260C	10-11-17	10-11-17	
Bromomethane	ND	0.0012	EPA 8260C	10-11-17	10-11-17	
Chloroethane	ND	0.0059	EPA 8260C	10-11-17	10-11-17	
Trichlorofluoromethane	ND	0.0012	EPA 8260C	10-11-17	10-11-17	
1,1-Dichloroethene	ND	0.0012	EPA 8260C	10-11-17	10-11-17	
Acetone	0.16	0.0059	EPA 8260C	10-11-17	10-11-17	
Iodomethane	ND	0.0087	EPA 8260C	10-11-17	10-11-17	
Carbon Disulfide	0.0015	0.0012	EPA 8260C	10-11-17	10-11-17	
Methylene Chloride	ND	0.0059	EPA 8260C	10-11-17	10-11-17	
(trans) 1,2-Dichloroethene	ND	0.0012	EPA 8260C	10-11-17	10-11-17	
Methyl t-Butyl Ether	ND	0.0012	EPA 8260C	10-11-17	10-11-17	
1,1-Dichloroethane	ND	0.0012	EPA 8260C	10-11-17	10-11-17	
Vinyl Acetate	ND	0.0059	EPA 8260C	10-11-17	10-11-17	
2,2-Dichloropropane	ND	0.0012	EPA 8260C	10-11-17	10-11-17	
(cis) 1,2-Dichloroethene	ND	0.0012	EPA 8260C	10-11-17	10-11-17	
2-Butanone	0.049	0.0059	EPA 8260C	10-11-17	10-11-17	
Bromochloromethane	ND	0.0012	EPA 8260C	10-11-17	10-11-17	
Chloroform	ND	0.0012	EPA 8260C	10-11-17	10-11-17	
1,1,1-Trichloroethane	ND	0.0012	EPA 8260C	10-11-17	10-11-17	
Carbon Tetrachloride	ND	0.0012	EPA 8260C	10-11-17	10-11-17	
1,1-Dichloropropene	ND	0.0012	EPA 8260C	10-11-17	10-11-17	
Benzene	ND	0.0012	EPA 8260C	10-11-17	10-11-17	
1,2-Dichloroethane	ND	0.0012	EPA 8260C	10-11-17	10-11-17	
Trichloroethene	ND	0.0012	EPA 8260C	10-11-17	10-11-17	
1,2-Dichloropropane	ND	0.0012	EPA 8260C	10-11-17	10-11-17	
Dibromomethane	ND	0.0012	EPA 8260C	10-11-17	10-11-17	
Bromodichloromethane	ND	0.0012	EPA 8260C	10-11-17	10-11-17	
2-Chloroethyl Vinyl Ether	ND	0.0059	EPA 8260C	10-11-17	10-11-17	
(cis) 1,3-Dichloropropene	ND	0.0012	EPA 8260C	10-11-17	10-11-17	
Methyl Isobutyl Ketone	ND	0.0059	EPA 8260C	10-11-17	10-11-17	
Toluene	ND	0.0059	EPA 8260C	10-11-17	10-11-17	
(trans) 1,3-Dichloropropene	ND	0.0012	EPA 8260C	10-11-17	10-11-17	



Date of Report: October 19, 2017  
 Samples Submitted: October 5, 2017  
 Laboratory Reference: 1710-072  
 Project: 4082-039-01

**VOLATILES EPA 8260C**  
 page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>FL358-B3-7-8</b>					
Laboratory ID:	10-072-04					
1,1,2-Trichloroethane	ND	0.0012	EPA 8260C	10-11-17	10-11-17	
Tetrachloroethene	ND	0.0012	EPA 8260C	10-11-17	10-11-17	
1,3-Dichloropropane	ND	0.0012	EPA 8260C	10-11-17	10-11-17	
2-Hexanone	ND	0.0059	EPA 8260C	10-11-17	10-11-17	
Dibromochloromethane	ND	0.0012	EPA 8260C	10-11-17	10-11-17	
1,2-Dibromoethane	ND	0.0012	EPA 8260C	10-11-17	10-11-17	
Chlorobenzene	ND	0.0012	EPA 8260C	10-11-17	10-11-17	
1,1,1,2-Tetrachloroethane	ND	0.0012	EPA 8260C	10-11-17	10-11-17	
Ethylbenzene	ND	0.0012	EPA 8260C	10-11-17	10-11-17	
m,p-Xylene	ND	0.0024	EPA 8260C	10-11-17	10-11-17	
o-Xylene	ND	0.0012	EPA 8260C	10-11-17	10-11-17	
Styrene	ND	0.0012	EPA 8260C	10-11-17	10-11-17	
Bromoform	ND	0.0059	EPA 8260C	10-11-17	10-11-17	
Isopropylbenzene	ND	0.0012	EPA 8260C	10-11-17	10-11-17	
Bromobenzene	ND	0.0012	EPA 8260C	10-11-17	10-11-17	
1,1,2,2-Tetrachloroethane	ND	0.0012	EPA 8260C	10-11-17	10-11-17	
1,2,3-Trichloropropane	ND	0.0012	EPA 8260C	10-11-17	10-11-17	
n-Propylbenzene	ND	0.0012	EPA 8260C	10-11-17	10-11-17	
2-Chlorotoluene	ND	0.0012	EPA 8260C	10-11-17	10-11-17	
4-Chlorotoluene	ND	0.0012	EPA 8260C	10-11-17	10-11-17	
1,3,5-Trimethylbenzene	ND	0.0012	EPA 8260C	10-11-17	10-11-17	
tert-Butylbenzene	ND	0.0012	EPA 8260C	10-11-17	10-11-17	
1,2,4-Trimethylbenzene	ND	0.0012	EPA 8260C	10-11-17	10-11-17	
sec-Butylbenzene	ND	0.0012	EPA 8260C	10-11-17	10-11-17	
1,3-Dichlorobenzene	ND	0.0012	EPA 8260C	10-11-17	10-11-17	
p-Isopropyltoluene	ND	0.0012	EPA 8260C	10-11-17	10-11-17	
1,4-Dichlorobenzene	ND	0.0012	EPA 8260C	10-11-17	10-11-17	
1,2-Dichlorobenzene	ND	0.0012	EPA 8260C	10-11-17	10-11-17	
n-Butylbenzene	ND	0.0012	EPA 8260C	10-11-17	10-11-17	
1,2-Dibromo-3-chloropropane	ND	0.0059	EPA 8260C	10-11-17	10-11-17	
1,2,4-Trichlorobenzene	ND	0.0012	EPA 8260C	10-11-17	10-11-17	
Hexachlorobutadiene	ND	0.0059	EPA 8260C	10-11-17	10-11-17	
Naphthalene	ND	0.0012	EPA 8260C	10-11-17	10-11-17	
1,2,3-Trichlorobenzene	ND	0.0012	EPA 8260C	10-11-17	10-11-17	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>131</i>	<i>73-134</i>				
<i>Toluene-d8</i>	<i>124</i>	<i>81-124</i>				
<i>4-Bromofluorobenzene</i>	<i>110</i>	<i>80-131</i>				



Date of Report: October 19, 2017  
 Samples Submitted: October 5, 2017  
 Laboratory Reference: 1710-072  
 Project: 4082-039-01

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Matrix: Soil  
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>FL358-B3-12-13</b>					
Laboratory ID:	10-072-05					
Dichlorodifluoromethane	ND	0.0040	EPA 8260C	10-12-17	10-12-17	
Chloromethane	ND	0.011	EPA 8260C	10-12-17	10-12-17	
Vinyl Chloride	ND	0.0019	EPA 8260C	10-12-17	10-12-17	
Bromomethane	ND	0.0015	EPA 8260C	10-12-17	10-12-17	
Chloroethane	ND	0.0074	EPA 8260C	10-12-17	10-12-17	
Trichlorofluoromethane	ND	0.0015	EPA 8260C	10-12-17	10-12-17	
1,1-Dichloroethene	ND	0.0015	EPA 8260C	10-12-17	10-12-17	
Acetone	0.46	0.0074	EPA 8260C	10-12-17	10-12-17	
Iodomethane	ND	0.011	EPA 8260C	10-12-17	10-12-17	
Carbon Disulfide	0.0020	0.0015	EPA 8260C	10-12-17	10-12-17	
Methylene Chloride	ND	0.0074	EPA 8260C	10-12-17	10-12-17	
(trans) 1,2-Dichloroethene	ND	0.0015	EPA 8260C	10-12-17	10-12-17	
Methyl t-Butyl Ether	ND	0.0015	EPA 8260C	10-12-17	10-12-17	
1,1-Dichloroethane	ND	0.0015	EPA 8260C	10-12-17	10-12-17	
Vinyl Acetate	ND	0.0074	EPA 8260C	10-12-17	10-12-17	
2,2-Dichloropropane	ND	0.0015	EPA 8260C	10-12-17	10-12-17	
(cis) 1,2-Dichloroethene	ND	0.0015	EPA 8260C	10-12-17	10-12-17	
2-Butanone	0.070	0.0074	EPA 8260C	10-12-17	10-12-17	
Bromochloromethane	ND	0.0015	EPA 8260C	10-12-17	10-12-17	
Chloroform	ND	0.0015	EPA 8260C	10-12-17	10-12-17	
1,1,1-Trichloroethane	ND	0.0015	EPA 8260C	10-12-17	10-12-17	
Carbon Tetrachloride	ND	0.0015	EPA 8260C	10-12-17	10-12-17	
1,1-Dichloropropene	ND	0.0015	EPA 8260C	10-12-17	10-12-17	
Benzene	ND	0.0015	EPA 8260C	10-12-17	10-12-17	
1,2-Dichloroethane	ND	0.0015	EPA 8260C	10-12-17	10-12-17	
Trichloroethene	ND	0.0015	EPA 8260C	10-12-17	10-12-17	
1,2-Dichloropropane	ND	0.0015	EPA 8260C	10-12-17	10-12-17	
Dibromomethane	ND	0.0015	EPA 8260C	10-12-17	10-12-17	
Bromodichloromethane	ND	0.0015	EPA 8260C	10-12-17	10-12-17	
2-Chloroethyl Vinyl Ether	ND	0.0074	EPA 8260C	10-12-17	10-12-17	
(cis) 1,3-Dichloropropene	ND	0.0015	EPA 8260C	10-12-17	10-12-17	
Methyl Isobutyl Ketone	ND	0.0074	EPA 8260C	10-12-17	10-12-17	
Toluene	0.032	0.0074	EPA 8260C	10-12-17	10-12-17	
(trans) 1,3-Dichloropropene	ND	0.0015	EPA 8260C	10-12-17	10-12-17	



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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>FL358-B3-12-13</b>					
Laboratory ID:	10-072-05					
1,1,2-Trichloroethane	ND	0.0015	EPA 8260C	10-12-17	10-12-17	
Tetrachloroethene	ND	0.0015	EPA 8260C	10-12-17	10-12-17	
1,3-Dichloropropane	ND	0.0015	EPA 8260C	10-12-17	10-12-17	
2-Hexanone	ND	0.0074	EPA 8260C	10-12-17	10-12-17	
Dibromochloromethane	ND	0.0015	EPA 8260C	10-12-17	10-12-17	
1,2-Dibromoethane	ND	0.0015	EPA 8260C	10-12-17	10-12-17	
Chlorobenzene	ND	0.0015	EPA 8260C	10-12-17	10-12-17	
1,1,1,2-Tetrachloroethane	ND	0.0015	EPA 8260C	10-12-17	10-12-17	
Ethylbenzene	0.014	0.0015	EPA 8260C	10-12-17	10-12-17	
m,p-Xylene	ND	0.14	EPA 8260C	10-11-17	10-11-17	
o-Xylene	ND	0.0015	EPA 8260C	10-12-17	10-12-17	
Styrene	ND	0.0015	EPA 8260C	10-12-17	10-12-17	
Bromoform	ND	0.0074	EPA 8260C	10-12-17	10-12-17	
Isopropylbenzene	ND	0.0015	EPA 8260C	10-12-17	10-12-17	
Bromobenzene	ND	0.068	EPA 8260C	10-11-17	10-11-17	
1,1,2,2-Tetrachloroethane	ND	0.068	EPA 8260C	10-11-17	10-11-17	
1,2,3-Trichloropropane	ND	0.068	EPA 8260C	10-11-17	10-11-17	
n-Propylbenzene	ND	0.068	EPA 8260C	10-11-17	10-11-17	
2-Chlorotoluene	ND	0.068	EPA 8260C	10-11-17	10-11-17	
4-Chlorotoluene	ND	0.068	EPA 8260C	10-11-17	10-11-17	
1,3,5-Trimethylbenzene	ND	0.068	EPA 8260C	10-11-17	10-11-17	
tert-Butylbenzene	ND	0.068	EPA 8260C	10-11-17	10-11-17	
1,2,4-Trimethylbenzene	ND	0.068	EPA 8260C	10-11-17	10-11-17	
sec-Butylbenzene	ND	0.068	EPA 8260C	10-11-17	10-11-17	
1,3-Dichlorobenzene	ND	0.068	EPA 8260C	10-11-17	10-11-17	
p-Isopropyltoluene	96	0.68	EPA 8260C	10-11-17	10-12-17	
1,4-Dichlorobenzene	ND	0.068	EPA 8260C	10-11-17	10-11-17	
1,2-Dichlorobenzene	ND	0.068	EPA 8260C	10-11-17	10-11-17	
n-Butylbenzene	ND	0.068	EPA 8260C	10-11-17	10-11-17	
1,2-Dibromo-3-chloropropane	ND	0.34	EPA 8260C	10-11-17	10-11-17	
1,2,4-Trichlorobenzene	ND	0.068	EPA 8260C	10-11-17	10-11-17	
Hexachlorobutadiene	ND	0.34	EPA 8260C	10-11-17	10-11-17	
Naphthalene	ND	0.068	EPA 8260C	10-11-17	10-11-17	
1,2,3-Trichlorobenzene	ND	0.068	EPA 8260C	10-11-17	10-11-17	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>118</i>	<i>73-134</i>				
<i>Toluene-d8</i>	<i>123</i>	<i>81-124</i>				
<i>4-Bromofluorobenzene</i>	<i>118</i>	<i>80-131</i>				



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 Project: 4082-039-01

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Matrix: Soil  
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>FL358-B1-0.5-1</b>					
Laboratory ID:	10-072-08					
Dichlorodifluoromethane	ND	0.0026	EPA 8260C	10-11-17	10-11-17	
Chloromethane	ND	0.0073	EPA 8260C	10-11-17	10-11-17	
Vinyl Chloride	ND	0.0011	EPA 8260C	10-11-17	10-11-17	
Bromomethane	ND	0.0011	EPA 8260C	10-11-17	10-11-17	
Chloroethane	ND	0.0054	EPA 8260C	10-11-17	10-11-17	
Trichlorofluoromethane	ND	0.0011	EPA 8260C	10-11-17	10-11-17	
1,1-Dichloroethene	ND	0.0011	EPA 8260C	10-11-17	10-11-17	
Acetone	0.011	0.0054	EPA 8260C	10-11-17	10-11-17	
Iodomethane	ND	0.0079	EPA 8260C	10-11-17	10-11-17	
Carbon Disulfide	ND	0.0011	EPA 8260C	10-11-17	10-11-17	
Methylene Chloride	ND	0.0054	EPA 8260C	10-11-17	10-11-17	
(trans) 1,2-Dichloroethene	ND	0.0011	EPA 8260C	10-11-17	10-11-17	
Methyl t-Butyl Ether	ND	0.0011	EPA 8260C	10-11-17	10-11-17	
1,1-Dichloroethane	ND	0.0011	EPA 8260C	10-11-17	10-11-17	
Vinyl Acetate	ND	0.0054	EPA 8260C	10-11-17	10-11-17	
2,2-Dichloropropane	ND	0.0011	EPA 8260C	10-11-17	10-11-17	
(cis) 1,2-Dichloroethene	ND	0.0011	EPA 8260C	10-11-17	10-11-17	
2-Butanone	ND	0.0054	EPA 8260C	10-11-17	10-11-17	
Bromochloromethane	ND	0.0011	EPA 8260C	10-11-17	10-11-17	
Chloroform	ND	0.0011	EPA 8260C	10-11-17	10-11-17	
1,1,1-Trichloroethane	ND	0.0011	EPA 8260C	10-11-17	10-11-17	
Carbon Tetrachloride	ND	0.0011	EPA 8260C	10-11-17	10-11-17	
1,1-Dichloropropene	ND	0.0011	EPA 8260C	10-11-17	10-11-17	
Benzene	ND	0.0011	EPA 8260C	10-11-17	10-11-17	
1,2-Dichloroethane	ND	0.0011	EPA 8260C	10-11-17	10-11-17	
Trichloroethene	ND	0.0011	EPA 8260C	10-11-17	10-11-17	
1,2-Dichloropropane	ND	0.0011	EPA 8260C	10-11-17	10-11-17	
Dibromomethane	ND	0.0011	EPA 8260C	10-11-17	10-11-17	
Bromodichloromethane	ND	0.0011	EPA 8260C	10-11-17	10-11-17	
2-Chloroethyl Vinyl Ether	ND	0.0054	EPA 8260C	10-11-17	10-11-17	
(cis) 1,3-Dichloropropene	ND	0.0011	EPA 8260C	10-11-17	10-11-17	
Methyl Isobutyl Ketone	ND	0.0054	EPA 8260C	10-11-17	10-11-17	
Toluene	ND	0.0054	EPA 8260C	10-11-17	10-11-17	
(trans) 1,3-Dichloropropene	ND	0.0011	EPA 8260C	10-11-17	10-11-17	



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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>FL358-B1-0.5-1</b>					
Laboratory ID:	10-072-08					
1,1,2-Trichloroethane	ND	0.0011	EPA 8260C	10-11-17	10-11-17	
Tetrachloroethene	ND	0.0011	EPA 8260C	10-11-17	10-11-17	
1,3-Dichloropropane	ND	0.0011	EPA 8260C	10-11-17	10-11-17	
2-Hexanone	ND	0.0054	EPA 8260C	10-11-17	10-11-17	
Dibromochloromethane	ND	0.0011	EPA 8260C	10-11-17	10-11-17	
1,2-Dibromoethane	ND	0.0011	EPA 8260C	10-11-17	10-11-17	
Chlorobenzene	ND	0.0011	EPA 8260C	10-11-17	10-11-17	
1,1,1,2-Tetrachloroethane	ND	0.0011	EPA 8260C	10-11-17	10-11-17	
Ethylbenzene	ND	0.0011	EPA 8260C	10-11-17	10-11-17	
m,p-Xylene	ND	0.0021	EPA 8260C	10-11-17	10-11-17	
o-Xylene	ND	0.0011	EPA 8260C	10-11-17	10-11-17	
Styrene	ND	0.0011	EPA 8260C	10-11-17	10-11-17	
Bromoform	ND	0.0054	EPA 8260C	10-11-17	10-11-17	
Isopropylbenzene	ND	0.0011	EPA 8260C	10-11-17	10-11-17	
Bromobenzene	ND	0.0011	EPA 8260C	10-11-17	10-11-17	
1,1,2,2-Tetrachloroethane	ND	0.0011	EPA 8260C	10-11-17	10-11-17	
1,2,3-Trichloropropane	ND	0.0011	EPA 8260C	10-11-17	10-11-17	
n-Propylbenzene	ND	0.0011	EPA 8260C	10-11-17	10-11-17	
2-Chlorotoluene	ND	0.0011	EPA 8260C	10-11-17	10-11-17	
4-Chlorotoluene	ND	0.0011	EPA 8260C	10-11-17	10-11-17	
1,3,5-Trimethylbenzene	ND	0.0011	EPA 8260C	10-11-17	10-11-17	
tert-Butylbenzene	ND	0.0011	EPA 8260C	10-11-17	10-11-17	
1,2,4-Trimethylbenzene	ND	0.0011	EPA 8260C	10-11-17	10-11-17	
sec-Butylbenzene	ND	0.0011	EPA 8260C	10-11-17	10-11-17	
1,3-Dichlorobenzene	ND	0.0011	EPA 8260C	10-11-17	10-11-17	
p-Isopropyltoluene	ND	0.0011	EPA 8260C	10-11-17	10-11-17	
1,4-Dichlorobenzene	ND	0.0011	EPA 8260C	10-11-17	10-11-17	
1,2-Dichlorobenzene	ND	0.0011	EPA 8260C	10-11-17	10-11-17	
n-Butylbenzene	ND	0.0011	EPA 8260C	10-11-17	10-11-17	
1,2-Dibromo-3-chloropropane	ND	0.0054	EPA 8260C	10-11-17	10-11-17	
1,2,4-Trichlorobenzene	ND	0.0011	EPA 8260C	10-11-17	10-11-17	
Hexachlorobutadiene	ND	0.0054	EPA 8260C	10-11-17	10-11-17	
Naphthalene	ND	0.0011	EPA 8260C	10-11-17	10-11-17	
1,2,3-Trichlorobenzene	ND	0.0011	EPA 8260C	10-11-17	10-11-17	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>124</i>	<i>73-134</i>				
<i>Toluene-d8</i>	<i>122</i>	<i>81-124</i>				
<i>4-Bromofluorobenzene</i>	<i>118</i>	<i>80-131</i>				



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 Project: 4082-039-01

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Matrix: Soil  
 Units: mg/kg

<b>Analyte</b>	<b>Result</b>	<b>PQL</b>	<b>Method</b>	<b>Date Prepared</b>	<b>Date Analyzed</b>	<b>Flags</b>
<b>Client ID:</b>	<b>FL358-B1-5-6</b>					
<b>Laboratory ID:</b>	10-072-09					
Dichlorodifluoromethane	ND	0.0023	EPA 8260C	10-11-17	10-11-17	
Chloromethane	ND	0.0066	EPA 8260C	10-11-17	10-11-17	
Vinyl Chloride	ND	0.00097	EPA 8260C	10-11-17	10-11-17	
Bromomethane	ND	0.00097	EPA 8260C	10-11-17	10-11-17	
Chloroethane	ND	0.0048	EPA 8260C	10-11-17	10-11-17	
Trichlorofluoromethane	ND	0.00097	EPA 8260C	10-11-17	10-11-17	
1,1-Dichloroethene	ND	0.00097	EPA 8260C	10-11-17	10-11-17	
Acetone	0.060	0.0048	EPA 8260C	10-11-17	10-11-17	
Iodomethane	ND	0.0072	EPA 8260C	10-11-17	10-11-17	
Carbon Disulfide	0.0012	0.00097	EPA 8260C	10-11-17	10-11-17	
Methylene Chloride	ND	0.0048	EPA 8260C	10-11-17	10-11-17	
(trans) 1,2-Dichloroethene	ND	0.00097	EPA 8260C	10-11-17	10-11-17	
Methyl t-Butyl Ether	ND	0.00097	EPA 8260C	10-11-17	10-11-17	
1,1-Dichloroethane	ND	0.00097	EPA 8260C	10-11-17	10-11-17	
Vinyl Acetate	ND	0.0048	EPA 8260C	10-11-17	10-11-17	
2,2-Dichloropropane	ND	0.00097	EPA 8260C	10-11-17	10-11-17	
(cis) 1,2-Dichloroethene	0.0053	0.00097	EPA 8260C	10-11-17	10-11-17	
2-Butanone	0.0067	0.0048	EPA 8260C	10-11-17	10-11-17	
Bromochloromethane	ND	0.00097	EPA 8260C	10-11-17	10-11-17	
Chloroform	ND	0.00097	EPA 8260C	10-11-17	10-11-17	
1,1,1-Trichloroethane	ND	0.00097	EPA 8260C	10-11-17	10-11-17	
Carbon Tetrachloride	ND	0.00097	EPA 8260C	10-11-17	10-11-17	
1,1-Dichloropropene	ND	0.00097	EPA 8260C	10-11-17	10-11-17	
Benzene	0.0010	0.00097	EPA 8260C	10-11-17	10-11-17	
1,2-Dichloroethane	ND	0.00097	EPA 8260C	10-11-17	10-11-17	
Trichloroethene	ND	0.00097	EPA 8260C	10-11-17	10-11-17	
1,2-Dichloropropane	ND	0.00097	EPA 8260C	10-11-17	10-11-17	
Dibromomethane	ND	0.00097	EPA 8260C	10-11-17	10-11-17	
Bromodichloromethane	ND	0.00097	EPA 8260C	10-11-17	10-11-17	
2-Chloroethyl Vinyl Ether	ND	0.0048	EPA 8260C	10-11-17	10-11-17	
(cis) 1,3-Dichloropropene	ND	0.00097	EPA 8260C	10-11-17	10-11-17	
Methyl Isobutyl Ketone	ND	0.0048	EPA 8260C	10-11-17	10-11-17	
Toluene	ND	0.0048	EPA 8260C	10-11-17	10-11-17	
(trans) 1,3-Dichloropropene	ND	0.00097	EPA 8260C	10-11-17	10-11-17	



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 Project: 4082-039-01

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>FL358-B1-5-6</b>					
Laboratory ID:	10-072-09					
1,1,2-Trichloroethane	ND	0.00097	EPA 8260C	10-11-17	10-11-17	
Tetrachloroethene	ND	0.00097	EPA 8260C	10-11-17	10-11-17	
1,3-Dichloropropane	ND	0.00097	EPA 8260C	10-11-17	10-11-17	
2-Hexanone	ND	0.0048	EPA 8260C	10-11-17	10-11-17	
Dibromochloromethane	ND	0.00097	EPA 8260C	10-11-17	10-11-17	
1,2-Dibromoethane	ND	0.00097	EPA 8260C	10-11-17	10-11-17	
Chlorobenzene	ND	0.00097	EPA 8260C	10-11-17	10-11-17	
1,1,1,2-Tetrachloroethane	ND	0.00097	EPA 8260C	10-11-17	10-11-17	
Ethylbenzene	ND	0.00097	EPA 8260C	10-11-17	10-11-17	
m,p-Xylene	ND	0.0019	EPA 8260C	10-11-17	10-11-17	
o-Xylene	ND	0.00097	EPA 8260C	10-11-17	10-11-17	
Styrene	ND	0.00097	EPA 8260C	10-11-17	10-11-17	
Bromoform	ND	0.0048	EPA 8260C	10-11-17	10-11-17	
Isopropylbenzene	ND	0.00097	EPA 8260C	10-11-17	10-11-17	
Bromobenzene	ND	0.057	EPA 8260C	10-12-17	10-12-17	
1,1,2,2-Tetrachloroethane	ND	0.057	EPA 8260C	10-12-17	10-12-17	
1,2,3-Trichloropropane	ND	0.057	EPA 8260C	10-12-17	10-12-17	
n-Propylbenzene	ND	0.057	EPA 8260C	10-12-17	10-12-17	
2-Chlorotoluene	ND	0.057	EPA 8260C	10-12-17	10-12-17	
4-Chlorotoluene	ND	0.057	EPA 8260C	10-12-17	10-12-17	
1,3,5-Trimethylbenzene	ND	0.057	EPA 8260C	10-12-17	10-12-17	
tert-Butylbenzene	ND	0.057	EPA 8260C	10-12-17	10-12-17	
1,2,4-Trimethylbenzene	ND	0.057	EPA 8260C	10-12-17	10-12-17	
sec-Butylbenzene	ND	0.057	EPA 8260C	10-12-17	10-12-17	
1,3-Dichlorobenzene	ND	0.057	EPA 8260C	10-12-17	10-12-17	
p-Isopropyltoluene	ND	0.057	EPA 8260C	10-12-17	10-12-17	
1,4-Dichlorobenzene	ND	0.057	EPA 8260C	10-12-17	10-12-17	
1,2-Dichlorobenzene	ND	0.057	EPA 8260C	10-12-17	10-12-17	
n-Butylbenzene	ND	0.057	EPA 8260C	10-12-17	10-12-17	
1,2-Dibromo-3-chloropropane	ND	0.29	EPA 8260C	10-12-17	10-12-17	
1,2,4-Trichlorobenzene	ND	0.057	EPA 8260C	10-12-17	10-12-17	
Hexachlorobutadiene	ND	0.29	EPA 8260C	10-12-17	10-12-17	
Naphthalene	ND	0.057	EPA 8260C	10-12-17	10-12-17	
1,2,3-Trichlorobenzene	ND	0.057	EPA 8260C	10-12-17	10-12-17	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>127</i>	<i>73-134</i>				
<i>Toluene-d8</i>	<i>104</i>	<i>81-124</i>				
<i>4-Bromofluorobenzene</i>	<i>87</i>	<i>80-131</i>				



Date of Report: October 19, 2017  
 Samples Submitted: October 5, 2017  
 Laboratory Reference: 1710-072  
 Project: 4082-039-01

**VOLATILES EPA 8260C**  
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Matrix: Soil  
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>FL358-B1-10-11</b>					
Laboratory ID:	10-072-10					
Dichlorodifluoromethane	ND	0.0024	EPA 8260C	10-11-17	10-11-17	
Chloromethane	ND	0.0068	EPA 8260C	10-11-17	10-11-17	
Vinyl Chloride	ND	0.0010	EPA 8260C	10-11-17	10-11-17	
Bromomethane	ND	0.0010	EPA 8260C	10-11-17	10-11-17	
Chloroethane	ND	0.0050	EPA 8260C	10-11-17	10-11-17	
Trichlorofluoromethane	ND	0.0010	EPA 8260C	10-11-17	10-11-17	
1,1-Dichloroethene	ND	0.0010	EPA 8260C	10-11-17	10-11-17	
Acetone	0.0060	0.0050	EPA 8260C	10-11-17	10-11-17	
Iodomethane	ND	0.0074	EPA 8260C	10-11-17	10-11-17	
Carbon Disulfide	ND	0.0010	EPA 8260C	10-11-17	10-11-17	
Methylene Chloride	ND	0.0050	EPA 8260C	10-11-17	10-11-17	
(trans) 1,2-Dichloroethene	ND	0.0010	EPA 8260C	10-11-17	10-11-17	
Methyl t-Butyl Ether	ND	0.0010	EPA 8260C	10-11-17	10-11-17	
1,1-Dichloroethane	ND	0.0010	EPA 8260C	10-11-17	10-11-17	
Vinyl Acetate	ND	0.0050	EPA 8260C	10-11-17	10-11-17	
2,2-Dichloropropane	ND	0.0010	EPA 8260C	10-11-17	10-11-17	
(cis) 1,2-Dichloroethene	0.014	0.0010	EPA 8260C	10-11-17	10-11-17	
2-Butanone	ND	0.0050	EPA 8260C	10-11-17	10-11-17	
Bromochloromethane	ND	0.0010	EPA 8260C	10-11-17	10-11-17	
Chloroform	ND	0.0010	EPA 8260C	10-11-17	10-11-17	
1,1,1-Trichloroethane	ND	0.0010	EPA 8260C	10-11-17	10-11-17	
Carbon Tetrachloride	ND	0.0010	EPA 8260C	10-11-17	10-11-17	
1,1-Dichloropropene	ND	0.0010	EPA 8260C	10-11-17	10-11-17	
Benzene	ND	0.0010	EPA 8260C	10-11-17	10-11-17	
1,2-Dichloroethane	ND	0.0010	EPA 8260C	10-11-17	10-11-17	
Trichloroethene	0.0076	0.0010	EPA 8260C	10-11-17	10-11-17	
1,2-Dichloropropane	ND	0.0010	EPA 8260C	10-11-17	10-11-17	
Dibromomethane	ND	0.0010	EPA 8260C	10-11-17	10-11-17	
Bromodichloromethane	ND	0.0010	EPA 8260C	10-11-17	10-11-17	
2-Chloroethyl Vinyl Ether	ND	0.0050	EPA 8260C	10-11-17	10-11-17	
(cis) 1,3-Dichloropropene	ND	0.0010	EPA 8260C	10-11-17	10-11-17	
Methyl Isobutyl Ketone	ND	0.0050	EPA 8260C	10-11-17	10-11-17	
Toluene	ND	0.0050	EPA 8260C	10-11-17	10-11-17	
(trans) 1,3-Dichloropropene	ND	0.0010	EPA 8260C	10-11-17	10-11-17	



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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>FL358-B1-10-11</b>					
Laboratory ID:	10-072-10					
1,1,2-Trichloroethane	ND	0.0010	EPA 8260C	10-11-17	10-11-17	
Tetrachloroethene	0.016	0.0010	EPA 8260C	10-11-17	10-11-17	
1,3-Dichloropropane	ND	0.0010	EPA 8260C	10-11-17	10-11-17	
2-Hexanone	ND	0.0050	EPA 8260C	10-11-17	10-11-17	
Dibromochloromethane	ND	0.0010	EPA 8260C	10-11-17	10-11-17	
1,2-Dibromoethane	ND	0.0010	EPA 8260C	10-11-17	10-11-17	
Chlorobenzene	ND	0.0010	EPA 8260C	10-11-17	10-11-17	
1,1,1,2-Tetrachloroethane	ND	0.0010	EPA 8260C	10-11-17	10-11-17	
Ethylbenzene	ND	0.0010	EPA 8260C	10-11-17	10-11-17	
m,p-Xylene	ND	0.0020	EPA 8260C	10-11-17	10-11-17	
o-Xylene	ND	0.0010	EPA 8260C	10-11-17	10-11-17	
Styrene	ND	0.0010	EPA 8260C	10-11-17	10-11-17	
Bromoform	ND	0.0050	EPA 8260C	10-11-17	10-11-17	
Isopropylbenzene	ND	0.0010	EPA 8260C	10-11-17	10-11-17	
Bromobenzene	ND	0.0010	EPA 8260C	10-11-17	10-11-17	
1,1,2,2-Tetrachloroethane	ND	0.0010	EPA 8260C	10-11-17	10-11-17	
1,2,3-Trichloropropane	ND	0.0010	EPA 8260C	10-11-17	10-11-17	
n-Propylbenzene	ND	0.0010	EPA 8260C	10-11-17	10-11-17	
2-Chlorotoluene	ND	0.0010	EPA 8260C	10-11-17	10-11-17	
4-Chlorotoluene	ND	0.0010	EPA 8260C	10-11-17	10-11-17	
1,3,5-Trimethylbenzene	ND	0.0010	EPA 8260C	10-11-17	10-11-17	
tert-Butylbenzene	ND	0.0010	EPA 8260C	10-11-17	10-11-17	
1,2,4-Trimethylbenzene	ND	0.0010	EPA 8260C	10-11-17	10-11-17	
sec-Butylbenzene	ND	0.0010	EPA 8260C	10-11-17	10-11-17	
1,3-Dichlorobenzene	ND	0.0010	EPA 8260C	10-11-17	10-11-17	
p-Isopropyltoluene	ND	0.0010	EPA 8260C	10-11-17	10-11-17	
1,4-Dichlorobenzene	ND	0.0010	EPA 8260C	10-11-17	10-11-17	
1,2-Dichlorobenzene	ND	0.0010	EPA 8260C	10-11-17	10-11-17	
n-Butylbenzene	ND	0.0010	EPA 8260C	10-11-17	10-11-17	
1,2-Dibromo-3-chloropropane	ND	0.0050	EPA 8260C	10-11-17	10-11-17	
1,2,4-Trichlorobenzene	ND	0.0010	EPA 8260C	10-11-17	10-11-17	
Hexachlorobutadiene	ND	0.0050	EPA 8260C	10-11-17	10-11-17	
Naphthalene	ND	0.0010	EPA 8260C	10-11-17	10-11-17	
1,2,3-Trichlorobenzene	ND	0.0010	EPA 8260C	10-11-17	10-11-17	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>119</i>	<i>73-134</i>				
<i>Toluene-d8</i>	<i>118</i>	<i>81-124</i>				
<i>4-Bromofluorobenzene</i>	<i>112</i>	<i>80-131</i>				



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 Project: 4082-039-01

**VOLATILES EPA 8260C**  
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Matrix: Soil  
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>FL358-B1-13-14</b>					
Laboratory ID:	10-072-11					
Dichlorodifluoromethane	ND	0.0019	EPA 8260C	10-11-17	10-11-17	
Chloromethane	ND	0.0054	EPA 8260C	10-11-17	10-11-17	
Vinyl Chloride	ND	0.00080	EPA 8260C	10-11-17	10-11-17	
Bromomethane	ND	0.00080	EPA 8260C	10-11-17	10-11-17	
Chloroethane	ND	0.0040	EPA 8260C	10-11-17	10-11-17	
Trichlorofluoromethane	ND	0.00080	EPA 8260C	10-11-17	10-11-17	
1,1-Dichloroethene	ND	0.00080	EPA 8260C	10-11-17	10-11-17	
Acetone	ND	0.0040	EPA 8260C	10-11-17	10-11-17	
Iodomethane	ND	0.0059	EPA 8260C	10-11-17	10-11-17	
Carbon Disulfide	ND	0.00080	EPA 8260C	10-11-17	10-11-17	
Methylene Chloride	ND	0.0040	EPA 8260C	10-11-17	10-11-17	
(trans) 1,2-Dichloroethene	ND	0.00080	EPA 8260C	10-11-17	10-11-17	
Methyl t-Butyl Ether	ND	0.00080	EPA 8260C	10-11-17	10-11-17	
1,1-Dichloroethane	ND	0.00080	EPA 8260C	10-11-17	10-11-17	
Vinyl Acetate	ND	0.0040	EPA 8260C	10-11-17	10-11-17	
2,2-Dichloropropane	ND	0.00080	EPA 8260C	10-11-17	10-11-17	
(cis) 1,2-Dichloroethene	0.0043	0.00080	EPA 8260C	10-11-17	10-11-17	
2-Butanone	ND	0.0040	EPA 8260C	10-11-17	10-11-17	
Bromochloromethane	ND	0.00080	EPA 8260C	10-11-17	10-11-17	
Chloroform	ND	0.00080	EPA 8260C	10-11-17	10-11-17	
1,1,1-Trichloroethane	ND	0.00080	EPA 8260C	10-11-17	10-11-17	
Carbon Tetrachloride	ND	0.00080	EPA 8260C	10-11-17	10-11-17	
1,1-Dichloropropene	ND	0.00080	EPA 8260C	10-11-17	10-11-17	
Benzene	ND	0.00080	EPA 8260C	10-11-17	10-11-17	
1,2-Dichloroethane	ND	0.00080	EPA 8260C	10-11-17	10-11-17	
Trichloroethene	0.0022	0.00080	EPA 8260C	10-11-17	10-11-17	
1,2-Dichloropropane	ND	0.00080	EPA 8260C	10-11-17	10-11-17	
Dibromomethane	ND	0.00080	EPA 8260C	10-11-17	10-11-17	
Bromodichloromethane	ND	0.00080	EPA 8260C	10-11-17	10-11-17	
2-Chloroethyl Vinyl Ether	ND	0.0040	EPA 8260C	10-11-17	10-11-17	
(cis) 1,3-Dichloropropene	ND	0.00080	EPA 8260C	10-11-17	10-11-17	
Methyl Isobutyl Ketone	ND	0.0040	EPA 8260C	10-11-17	10-11-17	
Toluene	ND	0.0040	EPA 8260C	10-11-17	10-11-17	
(trans) 1,3-Dichloropropene	ND	0.00080	EPA 8260C	10-11-17	10-11-17	



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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>FL358-B1-13-14</b>					
Laboratory ID:	10-072-11					
1,1,2-Trichloroethane	ND	0.00080	EPA 8260C	10-11-17	10-11-17	
Tetrachloroethene	0.066	0.00080	EPA 8260C	10-11-17	10-11-17	
1,3-Dichloropropane	ND	0.00080	EPA 8260C	10-11-17	10-11-17	
2-Hexanone	ND	0.0040	EPA 8260C	10-11-17	10-11-17	
Dibromochloromethane	ND	0.00080	EPA 8260C	10-11-17	10-11-17	
1,2-Dibromoethane	ND	0.00080	EPA 8260C	10-11-17	10-11-17	
Chlorobenzene	ND	0.00080	EPA 8260C	10-11-17	10-11-17	
1,1,1,2-Tetrachloroethane	ND	0.00080	EPA 8260C	10-11-17	10-11-17	
Ethylbenzene	ND	0.00080	EPA 8260C	10-11-17	10-11-17	
m,p-Xylene	ND	0.0016	EPA 8260C	10-11-17	10-11-17	
o-Xylene	ND	0.00080	EPA 8260C	10-11-17	10-11-17	
Styrene	ND	0.00080	EPA 8260C	10-11-17	10-11-17	
Bromoform	ND	0.0040	EPA 8260C	10-11-17	10-11-17	
Isopropylbenzene	ND	0.00080	EPA 8260C	10-11-17	10-11-17	
Bromobenzene	ND	0.00080	EPA 8260C	10-11-17	10-11-17	
1,1,2,2-Tetrachloroethane	ND	0.00080	EPA 8260C	10-11-17	10-11-17	
1,2,3-Trichloropropane	ND	0.00080	EPA 8260C	10-11-17	10-11-17	
n-Propylbenzene	ND	0.00080	EPA 8260C	10-11-17	10-11-17	
2-Chlorotoluene	ND	0.00080	EPA 8260C	10-11-17	10-11-17	
4-Chlorotoluene	ND	0.00080	EPA 8260C	10-11-17	10-11-17	
1,3,5-Trimethylbenzene	ND	0.00080	EPA 8260C	10-11-17	10-11-17	
tert-Butylbenzene	ND	0.00080	EPA 8260C	10-11-17	10-11-17	
1,2,4-Trimethylbenzene	ND	0.00080	EPA 8260C	10-11-17	10-11-17	
sec-Butylbenzene	ND	0.00080	EPA 8260C	10-11-17	10-11-17	
1,3-Dichlorobenzene	ND	0.00080	EPA 8260C	10-11-17	10-11-17	
p-Isopropyltoluene	ND	0.00080	EPA 8260C	10-11-17	10-11-17	
1,4-Dichlorobenzene	ND	0.00080	EPA 8260C	10-11-17	10-11-17	
1,2-Dichlorobenzene	ND	0.00080	EPA 8260C	10-11-17	10-11-17	
n-Butylbenzene	ND	0.00080	EPA 8260C	10-11-17	10-11-17	
1,2-Dibromo-3-chloropropane	ND	0.0040	EPA 8260C	10-11-17	10-11-17	
1,2,4-Trichlorobenzene	ND	0.00080	EPA 8260C	10-11-17	10-11-17	
Hexachlorobutadiene	ND	0.0040	EPA 8260C	10-11-17	10-11-17	
Naphthalene	ND	0.00080	EPA 8260C	10-11-17	10-11-17	
1,2,3-Trichlorobenzene	ND	0.00080	EPA 8260C	10-11-17	10-11-17	
<b>Surrogate:</b>	<b>Percent Recovery</b>	<b>Control Limits</b>				
<i>Dibromofluoromethane</i>	123	73-134				
<i>Toluene-d8</i>	114	81-124				
<i>4-Bromofluorobenzene</i>	112	80-131				



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 Laboratory Reference: 1710-072  
 Project: 4082-039-01

**TOTAL METALS  
 EPA 6010C**

Matrix: Soil  
 Units: mg/kg (ppm)

<b>Analyte</b>	<b>Result</b>	<b>PQL</b>	<b>EPA Method</b>	<b>Date Prepared</b>	<b>Date Analyzed</b>	<b>Flags</b>
Lab ID: 10-072-01 <b>Client ID: FL358-B3-0-0.5</b>						
Arsenic	<b>ND</b>	5.4	6010C	10-16-17	10-17-17	
Lead	<b>ND</b>	5.4	6010C	10-16-17	10-17-17	
Lab ID: 10-072-02 <b>Client ID: FL358-B3-0.5-1</b>						
Arsenic	<b>46</b>	5.6	6010C	10-16-17	10-17-17	
Lead	<b>11</b>	5.6	6010C	10-16-17	10-17-17	



Date of Report: October 19, 2017  
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 Laboratory Reference: 1710-072  
 Project: 4082-039-01

**VOLATILES by EPA 8260C**  
**METHOD BLANK QUALITY CONTROL**  
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Matrix: Soil  
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB1011S1					
Dichlorodifluoromethane	ND	0.0024	EPA 8260C	10-11-17	10-11-17	
Chloromethane	ND	0.0068	EPA 8260C	10-11-17	10-11-17	
Vinyl Chloride	ND	0.0010	EPA 8260C	10-11-17	10-11-17	
Bromomethane	ND	0.0010	EPA 8260C	10-11-17	10-11-17	
Chloroethane	ND	0.0050	EPA 8260C	10-11-17	10-11-17	
Trichlorofluoromethane	ND	0.0010	EPA 8260C	10-11-17	10-11-17	
1,1-Dichloroethene	ND	0.0010	EPA 8260C	10-11-17	10-11-17	
Acetone	ND	0.0050	EPA 8260C	10-11-17	10-11-17	
Iodomethane	ND	0.0074	EPA 8260C	10-11-17	10-11-17	
Carbon Disulfide	ND	0.0010	EPA 8260C	10-11-17	10-11-17	
Methylene Chloride	ND	0.0050	EPA 8260C	10-11-17	10-11-17	
(trans) 1,2-Dichloroethene	ND	0.0010	EPA 8260C	10-11-17	10-11-17	
Methyl t-Butyl Ether	ND	0.0010	EPA 8260C	10-11-17	10-11-17	
1,1-Dichloroethane	ND	0.0010	EPA 8260C	10-11-17	10-11-17	
Vinyl Acetate	ND	0.0050	EPA 8260C	10-11-17	10-11-17	
2,2-Dichloropropane	ND	0.0010	EPA 8260C	10-11-17	10-11-17	
(cis) 1,2-Dichloroethene	ND	0.0010	EPA 8260C	10-11-17	10-11-17	
2-Butanone	ND	0.0050	EPA 8260C	10-11-17	10-11-17	
Bromochloromethane	ND	0.0010	EPA 8260C	10-11-17	10-11-17	
Chloroform	ND	0.0010	EPA 8260C	10-11-17	10-11-17	
1,1,1-Trichloroethane	ND	0.0010	EPA 8260C	10-11-17	10-11-17	
Carbon Tetrachloride	ND	0.0010	EPA 8260C	10-11-17	10-11-17	
1,1-Dichloropropene	ND	0.0010	EPA 8260C	10-11-17	10-11-17	
Benzene	ND	0.0010	EPA 8260C	10-11-17	10-11-17	
1,2-Dichloroethane	ND	0.0010	EPA 8260C	10-11-17	10-11-17	
Trichloroethene	ND	0.0010	EPA 8260C	10-11-17	10-11-17	
1,2-Dichloropropane	ND	0.0010	EPA 8260C	10-11-17	10-11-17	
Dibromomethane	ND	0.0010	EPA 8260C	10-11-17	10-11-17	
Bromodichloromethane	ND	0.0010	EPA 8260C	10-11-17	10-11-17	
2-Chloroethyl Vinyl Ether	ND	0.0050	EPA 8260C	10-11-17	10-11-17	
(cis) 1,3-Dichloropropene	ND	0.0010	EPA 8260C	10-11-17	10-11-17	
Methyl Isobutyl Ketone	ND	0.0050	EPA 8260C	10-11-17	10-11-17	
Toluene	ND	0.0050	EPA 8260C	10-11-17	10-11-17	
(trans) 1,3-Dichloropropene	ND	0.0010	EPA 8260C	10-11-17	10-11-17	



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 Project: 4082-039-01

**VOLATILES by EPA 8260C**  
**METHOD BLANK QUALITY CONTROL**  
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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:		MB1011S1				
1,1,2-Trichloroethane	ND	0.0010	EPA 8260C	10-11-17	10-11-17	
Tetrachloroethene	ND	0.0010	EPA 8260C	10-11-17	10-11-17	
1,3-Dichloropropane	ND	0.0010	EPA 8260C	10-11-17	10-11-17	
2-Hexanone	ND	0.0050	EPA 8260C	10-11-17	10-11-17	
Dibromochloromethane	ND	0.0010	EPA 8260C	10-11-17	10-11-17	
1,2-Dibromoethane	ND	0.0010	EPA 8260C	10-11-17	10-11-17	
Chlorobenzene	ND	0.0010	EPA 8260C	10-11-17	10-11-17	
1,1,1,2-Tetrachloroethane	ND	0.0010	EPA 8260C	10-11-17	10-11-17	
Ethylbenzene	ND	0.0010	EPA 8260C	10-11-17	10-11-17	
m,p-Xylene	ND	0.0020	EPA 8260C	10-11-17	10-11-17	
o-Xylene	ND	0.0010	EPA 8260C	10-11-17	10-11-17	
Styrene	ND	0.0010	EPA 8260C	10-11-17	10-11-17	
Bromoform	ND	0.0050	EPA 8260C	10-11-17	10-11-17	
Isopropylbenzene	ND	0.0010	EPA 8260C	10-11-17	10-11-17	
Bromobenzene	ND	0.0010	EPA 8260C	10-11-17	10-11-17	
1,1,2,2-Tetrachloroethane	ND	0.0010	EPA 8260C	10-11-17	10-11-17	
1,2,3-Trichloropropane	ND	0.0010	EPA 8260C	10-11-17	10-11-17	
n-Propylbenzene	ND	0.0010	EPA 8260C	10-11-17	10-11-17	
2-Chlorotoluene	ND	0.0010	EPA 8260C	10-11-17	10-11-17	
4-Chlorotoluene	ND	0.0010	EPA 8260C	10-11-17	10-11-17	
1,3,5-Trimethylbenzene	ND	0.0010	EPA 8260C	10-11-17	10-11-17	
tert-Butylbenzene	ND	0.0010	EPA 8260C	10-11-17	10-11-17	
1,2,4-Trimethylbenzene	ND	0.0010	EPA 8260C	10-11-17	10-11-17	
sec-Butylbenzene	ND	0.0010	EPA 8260C	10-11-17	10-11-17	
1,3-Dichlorobenzene	ND	0.0010	EPA 8260C	10-11-17	10-11-17	
p-Isopropyltoluene	ND	0.0010	EPA 8260C	10-11-17	10-11-17	
1,4-Dichlorobenzene	ND	0.0010	EPA 8260C	10-11-17	10-11-17	
1,2-Dichlorobenzene	ND	0.0010	EPA 8260C	10-11-17	10-11-17	
n-Butylbenzene	ND	0.0010	EPA 8260C	10-11-17	10-11-17	
1,2-Dibromo-3-chloropropane	ND	0.0050	EPA 8260C	10-11-17	10-11-17	
1,2,4-Trichlorobenzene	ND	0.0010	EPA 8260C	10-11-17	10-11-17	
Hexachlorobutadiene	ND	0.0050	EPA 8260C	10-11-17	10-11-17	
Naphthalene	ND	0.0010	EPA 8260C	10-11-17	10-11-17	
1,2,3-Trichlorobenzene	ND	0.0010	EPA 8260C	10-11-17	10-11-17	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>98</i>	<i>73-134</i>				
<i>Toluene-d8</i>	<i>99</i>	<i>81-124</i>				
<i>4-Bromofluorobenzene</i>	<i>100</i>	<i>80-131</i>				



Date of Report: October 19, 2017  
 Samples Submitted: October 5, 2017  
 Laboratory Reference: 1710-072  
 Project: 4082-039-01

**VOLATILES by EPA 8260C**  
**METHOD BLANK QUALITY CONTROL**  
 page 1 of 2

Matrix: Soil  
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB1012S1					
Dichlorodifluoromethane	ND	0.0027	EPA 8260C	10-12-17	10-12-17	
Chloromethane	ND	0.0072	EPA 8260C	10-12-17	10-12-17	
Vinyl Chloride	ND	0.0013	EPA 8260C	10-12-17	10-12-17	
Bromomethane	ND	0.0010	EPA 8260C	10-12-17	10-12-17	
Chloroethane	ND	0.0050	EPA 8260C	10-12-17	10-12-17	
Trichlorofluoromethane	ND	0.0010	EPA 8260C	10-12-17	10-12-17	
1,1-Dichloroethene	ND	0.0010	EPA 8260C	10-12-17	10-12-17	
Acetone	ND	0.0050	EPA 8260C	10-12-17	10-12-17	
Iodomethane	ND	0.0071	EPA 8260C	10-12-17	10-12-17	
Carbon Disulfide	ND	0.0010	EPA 8260C	10-12-17	10-12-17	
Methylene Chloride	ND	0.0050	EPA 8260C	10-12-17	10-12-17	
(trans) 1,2-Dichloroethene	ND	0.0010	EPA 8260C	10-12-17	10-12-17	
Methyl t-Butyl Ether	ND	0.0010	EPA 8260C	10-12-17	10-12-17	
1,1-Dichloroethane	ND	0.0010	EPA 8260C	10-12-17	10-12-17	
Vinyl Acetate	ND	0.0050	EPA 8260C	10-12-17	10-12-17	
2,2-Dichloropropane	ND	0.0010	EPA 8260C	10-12-17	10-12-17	
(cis) 1,2-Dichloroethene	ND	0.0010	EPA 8260C	10-12-17	10-12-17	
2-Butanone	ND	0.0050	EPA 8260C	10-12-17	10-12-17	
Bromochloromethane	ND	0.0010	EPA 8260C	10-12-17	10-12-17	
Chloroform	ND	0.0010	EPA 8260C	10-12-17	10-12-17	
1,1,1-Trichloroethane	ND	0.0010	EPA 8260C	10-12-17	10-12-17	
Carbon Tetrachloride	ND	0.0010	EPA 8260C	10-12-17	10-12-17	
1,1-Dichloropropene	ND	0.0010	EPA 8260C	10-12-17	10-12-17	
Benzene	ND	0.0010	EPA 8260C	10-12-17	10-12-17	
1,2-Dichloroethane	ND	0.0010	EPA 8260C	10-12-17	10-12-17	
Trichloroethene	ND	0.0010	EPA 8260C	10-12-17	10-12-17	
1,2-Dichloropropane	ND	0.0010	EPA 8260C	10-12-17	10-12-17	
Dibromomethane	ND	0.0010	EPA 8260C	10-12-17	10-12-17	
Bromodichloromethane	ND	0.0010	EPA 8260C	10-12-17	10-12-17	
2-Chloroethyl Vinyl Ether	ND	0.0050	EPA 8260C	10-12-17	10-12-17	
(cis) 1,3-Dichloropropene	ND	0.0010	EPA 8260C	10-12-17	10-12-17	
Methyl Isobutyl Ketone	ND	0.0050	EPA 8260C	10-12-17	10-12-17	
Toluene	ND	0.0050	EPA 8260C	10-12-17	10-12-17	
(trans) 1,3-Dichloropropene	ND	0.0010	EPA 8260C	10-12-17	10-12-17	



Date of Report: October 19, 2017  
 Samples Submitted: October 5, 2017  
 Laboratory Reference: 1710-072  
 Project: 4082-039-01

**VOLATILES by EPA 8260C**  
**METHOD BLANK QUALITY CONTROL**  
 page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB1012S1					
1,1,2-Trichloroethane	ND	0.0010	EPA 8260C	10-12-17	10-12-17	
Tetrachloroethene	ND	0.0010	EPA 8260C	10-12-17	10-12-17	
1,3-Dichloropropane	ND	0.0010	EPA 8260C	10-12-17	10-12-17	
2-Hexanone	ND	0.0050	EPA 8260C	10-12-17	10-12-17	
Dibromochloromethane	ND	0.0010	EPA 8260C	10-12-17	10-12-17	
1,2-Dibromoethane	ND	0.0010	EPA 8260C	10-12-17	10-12-17	
Chlorobenzene	ND	0.0010	EPA 8260C	10-12-17	10-12-17	
1,1,1,2-Tetrachloroethane	ND	0.0010	EPA 8260C	10-12-17	10-12-17	
Ethylbenzene	ND	0.0010	EPA 8260C	10-12-17	10-12-17	
m,p-Xylene	ND	0.0020	EPA 8260C	10-12-17	10-12-17	
o-Xylene	ND	0.0010	EPA 8260C	10-12-17	10-12-17	
Styrene	ND	0.0010	EPA 8260C	10-12-17	10-12-17	
Bromoform	ND	0.0050	EPA 8260C	10-12-17	10-12-17	
Isopropylbenzene	ND	0.0010	EPA 8260C	10-12-17	10-12-17	
Bromobenzene	ND	0.0010	EPA 8260C	10-12-17	10-12-17	
1,1,2,2-Tetrachloroethane	ND	0.0010	EPA 8260C	10-12-17	10-12-17	
1,2,3-Trichloropropane	ND	0.0010	EPA 8260C	10-12-17	10-12-17	
n-Propylbenzene	ND	0.0010	EPA 8260C	10-12-17	10-12-17	
2-Chlorotoluene	ND	0.0010	EPA 8260C	10-12-17	10-12-17	
4-Chlorotoluene	ND	0.0010	EPA 8260C	10-12-17	10-12-17	
1,3,5-Trimethylbenzene	ND	0.0010	EPA 8260C	10-12-17	10-12-17	
tert-Butylbenzene	ND	0.0010	EPA 8260C	10-12-17	10-12-17	
1,2,4-Trimethylbenzene	ND	0.0010	EPA 8260C	10-12-17	10-12-17	
sec-Butylbenzene	ND	0.0010	EPA 8260C	10-12-17	10-12-17	
1,3-Dichlorobenzene	ND	0.0010	EPA 8260C	10-12-17	10-12-17	
p-Isopropyltoluene	ND	0.0010	EPA 8260C	10-12-17	10-12-17	
1,4-Dichlorobenzene	ND	0.0010	EPA 8260C	10-12-17	10-12-17	
1,2-Dichlorobenzene	ND	0.0010	EPA 8260C	10-12-17	10-12-17	
n-Butylbenzene	ND	0.0010	EPA 8260C	10-12-17	10-12-17	
1,2-Dibromo-3-chloropropane	ND	0.0050	EPA 8260C	10-12-17	10-12-17	
1,2,4-Trichlorobenzene	ND	0.0010	EPA 8260C	10-12-17	10-12-17	
Hexachlorobutadiene	ND	0.0050	EPA 8260C	10-12-17	10-12-17	
Naphthalene	ND	0.0010	EPA 8260C	10-12-17	10-12-17	
1,2,3-Trichlorobenzene	ND	0.0010	EPA 8260C	10-12-17	10-12-17	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>107</i>	<i>73-134</i>				
<i>Toluene-d8</i>	<i>112</i>	<i>81-124</i>				
<i>4-Bromofluorobenzene</i>	<i>122</i>	<i>80-131</i>				



Date of Report: October 19, 2017  
 Samples Submitted: October 5, 2017  
 Laboratory Reference: 1710-072  
 Project: 4082-039-01

**VOLATILES by EPA 8260C  
 SB/SBD QUALITY CONTROL**

Matrix: Soil  
 Units: mg/kg

Analyte	Result		Spike Level		Percent Recovery		Recovery	RPD	RPD	Flags
					SB	SBD	Limits	RPD	Limit	
<b>SPIKE BLANKS</b>										
Laboratory ID:	SB1011S1									
	SB	SBD	SB	SBD	SB	SBD				
1,1-Dichloroethene	<b>0.0529</b>	<b>0.0533</b>	0.0500	0.0500	106	107	66-127	1	15	
Benzene	<b>0.0585</b>	<b>0.0594</b>	0.0500	0.0500	117	119	76-122	2	15	
Trichloroethene	<b>0.0390</b>	<b>0.0393</b>	0.0500	0.0500	78	79	78-120	1	15	
Toluene	<b>0.0526</b>	<b>0.0543</b>	0.0500	0.0500	105	109	83-120	3	15	
Chlorobenzene	<b>0.0452</b>	<b>0.0461</b>	0.0500	0.0500	90	92	81-120	2	15	
<i>Surrogate:</i>										
Dibromofluoromethane					102	109	73-134			
Toluene-d8					99	110	81-124			
4-Bromofluorobenzene					97	104	80-131			



Date of Report: October 19, 2017  
 Samples Submitted: October 5, 2017  
 Laboratory Reference: 1710-072  
 Project: 4082-039-01

**VOLATILES by EPA 8260C  
 SB/SBD QUALITY CONTROL**

Matrix: Soil  
 Units: mg/kg

Analyte	Result		Spike Level		Percent Recovery		Recovery	RPD	RPD	Flags
					SB	SBD	Limits	RPD	Limit	
<b>SPIKE BLANKS</b>										
Laboratory ID:	SB1012S1									
	SB	SBD	SB	SBD	SB	SBD				
1,1-Dichloroethene	<b>0.0529</b>	<b>0.0529</b>	0.0500	0.0500	106	106	66-127	0	15	
Benzene	<b>0.0604</b>	<b>0.0599</b>	0.0500	0.0500	121	120	76-122	1	15	
Trichloroethene	<b>0.0400</b>	<b>0.0395</b>	0.0500	0.0500	80	79	78-120	1	15	
Toluene	<b>0.0554</b>	<b>0.0540</b>	0.0500	0.0500	111	108	83-120	3	15	
Chlorobenzene	<b>0.0461</b>	<b>0.0453</b>	0.0500	0.0500	92	91	81-120	2	15	
<i>Surrogate:</i>										
Dibromofluoromethane					94	101	73-134			
Toluene-d8					102	107	81-124			
4-Bromofluorobenzene					108	111	80-131			



Date of Report: October 19, 2017  
Samples Submitted: October 5, 2017  
Laboratory Reference: 1710-072  
Project: 4082-039-01

**TOTAL METALS  
EPA 6010C  
METHOD BLANK QUALITY CONTROL**

Date Extracted: 10-16-17

Date Analyzed: 10-17-17

Matrix: Soil

Units: mg/kg (ppm)

Lab ID: MB1016SM2

Analyte	Method	Result	PQL
Arsenic	6010C	<b>ND</b>	5.0
Lead	6010C	<b>ND</b>	5.0



Date of Report: October 19, 2017  
 Samples Submitted: October 5, 2017  
 Laboratory Reference: 1710-072  
 Project: 4082-039-01

**TOTAL METALS  
 EPA 6010C  
 DUPLICATE QUALITY CONTROL**

Date Extracted: 10-16-17  
 Date Analyzed: 10-17-17  
  
 Matrix: Soil  
 Units: mg/kg (ppm)  
  
 Lab ID: 10-201-01

Analyte	Sample Result	Duplicate Result	RPD	PQL	Flags
Arsenic	<b>ND</b>	<b>ND</b>	NA	5.0	
Lead	<b>7.15</b>	<b>ND</b>	NA	5.0	



Date of Report: October 19, 2017  
 Samples Submitted: October 5, 2017  
 Laboratory Reference: 1710-072  
 Project: 4082-039-01

**TOTAL METALS  
 EPA 6010C  
 MS/MSD QUALITY CONTROL**

Date Extracted: 10-16-17

Date Analyzed: 10-17-17

Matrix: Soil

Units: mg/kg (ppm)

Lab ID: 10-201-01

Analyte	Spike Level	MS	Percent Recovery	MSD	Percent Recovery	RPD	Flags
Arsenic	100	<b>98.9</b>	99	<b>98.0</b>	98	1	
Lead	250	<b>233</b>	90	<b>235</b>	91	1	



Date of Report: October 19, 2017  
Samples Submitted: October 5, 2017  
Laboratory Reference: 1710-072  
Project: 4082-039-01

### % MOISTURE

Date Analyzed: 10-11&17-17

Client ID	Lab ID	% Moisture
FL358-B3-0-0.5	10-072-01	7
FL358-B3-0.5-1	10-072-02	11
FL358-B3-5-6	10-072-03	7
FL358-B3-7-8	10-072-04	14
FL358-B3-12-13	10-072-05	14
FL358-B1-0.5-1	10-072-08	7
FL358-B1-5-6	10-072-09	12
FL358-B1-10-11	10-072-10	17
FL358-B1-13-14	10-072-11	12





### Data Qualifiers and Abbreviations

- A - Due to a high sample concentration, the amount spiked is insufficient for meaningful MS/MSD recovery data.
  - B - The analyte indicated was also found in the blank sample.
  - C - The duplicate RPD is outside control limits due to high result variability when analyte concentrations are within five times the quantitation limit.
  - E - The value reported exceeds the quantitation range and is an estimate.
  - F - Surrogate recovery data is not available due to the high concentration of coeluting target compounds.
  - H - The analyte indicated is a common laboratory solvent and may have been introduced during sample preparation, and be impacting the sample result.
  - I - Compound recovery is outside of the control limits.
  - J - The value reported was below the practical quantitation limit. The value is an estimate.
  - K - Sample duplicate RPD is outside control limits due to sample inhomogeneity. The sample was re-extracted and re-analyzed with similar results.
  - L - The RPD is outside of the control limits.
  - M - Hydrocarbons in the gasoline range are impacting the diesel range result.
  - M1 - Hydrocarbons in the gasoline range (toluene-naphthalene) are present in the sample.
  - N - Hydrocarbons in the lube oil range are impacting the diesel range result.
  - N1 - Hydrocarbons in diesel range are impacting lube oil range results.
  - O - Hydrocarbons indicative of heavier fuels are present in the sample and are impacting the gasoline result.
  - P - The RPD of the detected concentrations between the two columns is greater than 40.
  - Q - Surrogate recovery is outside of the control limits.
  - S - Surrogate recovery data is not available due to the necessary dilution of the sample.
  - T - The sample chromatogram is not similar to a typical \_\_\_\_\_.
  - U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.
  - U1 - The practical quantitation limit is elevated due to interferences present in the sample.
  - V - Matrix Spike/Matrix Spike Duplicate recoveries are outside control limits due to matrix effects.
  - W - Matrix Spike/Matrix Spike Duplicate RPD are outside control limits due to matrix effects.
  - X - Sample extract treated with a mercury cleanup procedure.
  - X1 - Sample extract treated with a Sulfuric acid/Silica gel cleanup procedure.
  - Y - The calibration verification for this analyte exceeded the 20% drift specified in method 8260C, and therefore the reported result should be considered an estimate. The overall performance of the calibration verification standard met the acceptance criteria of the method.
  - Z -
- ND - Not Detected at PQL  
 PQL - Practical Quantitation Limit  
 RPD - Relative Percent Difference





**MVA Onsite Environmental Inc.**  
 Analytical Laboratory / Testing Services  
 14648 NE 95th Street • Redmond, WA 98052  
 Phone: (425) 883-3881 • www.onsite-env.com

# Chain of Custody

**10-072**

Company: **GE7**  
 Project Number: **4082-039-01**  
 Project Name: **Sound Transit Phase II**  
 Project Manager: **Marsi Beeson**  
 Sampled by: **Q61 PDR**

**Turnaround Request (In working days)**  
 (Check One)  
 Same Day  1 Day  
 2 Days  3 Days  
 Standard (7 Days) (TPH analysis 5 Days)  
 5 days (other)

**Laboratory Number:**

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix
1	FL358-B3-0-0.5	10/5/17	843	soil
2	FL358-B3-0.5-1		845	
3	FL358-B3-5-6		858	
4	FL358-B3-7-8		855	
5	FL358-B3-12-13		900	
6	FL358-B3-16.5-17.5		905	
7	FL358-B1-0-0.5		930	
8	FL358-B1-0.5-1		932	
9	FL358-B1-5-6		940	
10	FL358-B1-10-11		945	

Number of Containers
5

Date	Time	Comments/Special Instructions
10/5/17	1505	
10/15/17	1505	

Received	Signature	Company	Reviewed/Date
Relinquished	<i>[Signature]</i>	GE7	
Received	<i>[Signature]</i>	<i>[Signature]</i>	
Relinquished			
Received			
Relinquished			
Received			
Relinquished			

**Added 10/6/17 - DB (5 days)**  
**Added 10/16/17 DB (3 day TAT)**  
~~AS-7 ppm DB~~  
**AS-7 ppm DB**

Data Package: Standard  Level III  Level IV

Chromatograms with final report  Electronic Data Deliverables (EDDs)



# Onsite Environmental Inc.

Analytical Laboratory Testing Services  
14648 NE 95th Street • Redmond, WA 98052  
Phone: (425) 835-3881 • www.onsite-env.com

## Chain of Custody

Turnaround Request  
(in working days)

(Check One)

Same Day  1 Day

2 Days  3 Days

Standard (7 Days)  
(TPH analysis 5 Days)

5 days  
(other)

Laboratory Number:

**10-072**

Company: GE7

Project Number: 4882-039-01

Project Name: Sound Transit Phase 11

Project Manager: Marsi Beeson

Sampled by: AG/PDR

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix
11	FL358-B1-13-14	10/11	958	soil
12	FL358-B1-19-20	↓	955	↓

Number of Containers	Analysis
	NWTPH-HCID
	NWTPH-Gx/BTEX
	NWTPH-Gx
	NWTPH-Dx ( <input type="checkbox"/> Acid / SG Clean-up)
	Volatiles 8260C <input checked="" type="checkbox"/>
	Halogenated Volatiles 8260C
	EDB EPA 8011 (Waters Only)
	Semivolatiles 8270D/SIM (with low-level PAHs)
	PAHs 8270D/SIM (low-level)
	PCBs 8082A
	Organochlorine Pesticides 8081B
	Organophosphorus Pesticides 8270D/SIM
	Chlorinated Acid Herbicides 8151A
	Total RCRA Metals
	Total MTCA Metals
	TCLP Metals
	HEM (oil and grease) 1664A
	% Moisture <input checked="" type="checkbox"/>

Signature	Company	Date	Time	Comments/Special Instructions
	GE7	10/11/17	1505	
	GE7	10/17/17	1505	
Relinquished				
Received				
Relinquished				
Received				
Relinquished				
Received				
Relinquished				
Received				
Relinquished				
Reviewed/Date				

Data Package: Standard  Level III  Level IV

Chromatograms with final report  Electronic Data Deliverables (EDDs)



14648 NE 95<sup>th</sup> Street, Redmond, WA 98052 • (425) 883-3881

October 12, 2017

Marsi Beeson  
GeoEngineers, Inc.  
12000 NW Naito Prkway, Suite 180  
Portland, OR 97209

Re: Analytical Data for Project 4082-039-01  
Laboratory Reference No. 1710-062

Dear Marsi:

Enclosed are the analytical results and associated quality control data for samples submitted on October 5, 2017.

The standard policy of OnSite Environmental, Inc. is to store your samples for 30 days from the date of receipt. If you require longer storage, please contact the laboratory.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning the data, or need additional information, please feel free to call me.

Sincerely,

A handwritten signature in black ink, appearing to read "DB", with a long horizontal flourish extending to the right.

David Baumeister  
Project Manager

Enclosures



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OnSite Environmental, Inc. 14648 NE 95<sup>th</sup> Street, Redmond, WA 98052 (425) 883-3881

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: October 12, 2017  
Samples Submitted: October 5, 2017  
Laboratory Reference: 1710-062  
Project: 4082-039-01

### Case Narrative

Samples were collected on October 4, 2017 and received by the laboratory on October 5, 2017. They were maintained at the laboratory at a temperature of 2°C to 6°C.

Please note that any and all soil sample results are reported on a dry-weight basis, unless otherwise noted below.

General QA/QC issues associated with the analytical data enclosed in this laboratory report will be indicated with a reference to a comment or explanation on the Data Qualifier page. More complex and involved QA/QC issues will be discussed in detail below.

#### Volatiles EPA 8260C Analysis

Surrogate Standard Toluene-d8 is outside control limits on the high end for sample FL363-B4-7-8 due to co-eluting non-target analytes.

Some MTCA Method A cleanup levels are non-achievable for samples FL363-B4-11-12, FL363-B4-12-13 and FL363-B5-11.5-12.5 due to the necessary dilution of the samples.

Any other QA/QC issues associated with this extraction and analysis will be indicated with a footnote reference and discussed in detail on the Data Qualifier page.



Date of Report: October 12, 2017  
 Samples Submitted: October 5, 2017  
 Laboratory Reference: 1710-062  
 Project: 4082-039-01

### ANALYTICAL REPORT FOR SAMPLES

Client ID	Laboratory ID	Matrix	Date Sampled	Date Received	Notes
FL363-B4-0-0.5	10-062-01	Soil	10-4-17	10-5-17	
FL363-B4-0.5-1	10-062-02	Soil	10-4-17	10-5-17	
FL363-B4-7-8	10-062-03	Soil	10-4-17	10-5-17	
FL363-B4-11-12	10-062-04	Soil	10-4-17	10-5-17	
FL363-B4-12-13	10-062-05	Soil	10-4-17	10-5-17	
FL363-B4-17-18	10-062-06	Soil	10-4-17	10-5-17	
FL363-B5-0-0.5	10-062-07	Soil	10-4-17	10-5-17	
FL363-B5-0.5-1	10-062-08	Soil	10-4-17	10-5-17	
FL363-B5-5.5-6.5	10-062-09	Soil	10-4-17	10-5-17	
FL363-B5-11.5-12.5	10-062-10	Soil	10-4-17	10-5-17	
FL363-B5-17-18	10-062-11	Soil	10-4-17	10-5-17	
FL363-B6-6-7	10-062-14	Soil	10-4-17	10-5-17	
FL363-B6-11-12	10-062-15	Soil	10-4-17	10-5-17	
FL363-B6-17-18	10-062-16	Soil	10-4-17	10-5-17	
FL363-B7-0-0.5	10-062-17	Soil	10-4-17	10-5-17	
FL363-B7-0.5-1	10-062-18	Soil	10-4-17	10-5-17	
FL363-B7-6-7	10-062-19	Soil	10-4-17	10-5-17	
FL363-B7-10-11	10-062-20	Soil	10-4-17	10-5-17	
FL363-B7-17-18	10-062-21	Soil	10-4-17	10-5-17	



Date of Report: October 12, 2017  
 Samples Submitted: October 5, 2017  
 Laboratory Reference: 1710-062  
 Project: 4082-039-01

### NWTPH-Gx

Matrix: Soil  
 Units: mg/kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>FL363-B4-7-8</b>					
Laboratory ID:	10-062-03					
Gasoline	<b>ND</b>	8.8	NWTPH-Gx	10-9-17	10-10-17	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Fluorobenzene</i>	66	63-124				
<b>Client ID:</b>	<b>FL363-B4-11-12</b>					
Laboratory ID:	10-062-04					
Gasoline	<b>73</b>	11	NWTPH-Gx	10-9-17	10-11-17	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Fluorobenzene</i>	77	63-124				
<b>Client ID:</b>	<b>FL363-B4-12-13</b>					
Laboratory ID:	10-062-05					
Gasoline	<b>1300</b>	51	NWTPH-Gx	10-9-17	10-10-17	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Fluorobenzene</i>	103	63-124				
<b>Client ID:</b>	<b>FL363-B4-17-18</b>					
Laboratory ID:	10-062-06					
Gasoline	<b>8.8</b>	7.1	NWTPH-Gx	10-9-17	10-10-17	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Fluorobenzene</i>	80	63-124				
<b>Client ID:</b>	<b>FL363-B5-5.5-6.5</b>					
Laboratory ID:	10-062-09					
Gasoline	<b>ND</b>	5.7	NWTPH-Gx	10-9-17	10-10-17	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Fluorobenzene</i>	77	63-124				
<b>Client ID:</b>	<b>FL363-B5-11.5-12.5</b>					
Laboratory ID:	10-062-10					
Gasoline	<b>500</b>	31	NWTPH-Gx	10-9-17	10-10-17	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Fluorobenzene</i>	94	63-124				



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### NWTPH-Gx

Matrix: Soil  
 Units: mg/kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>FL363-B5-17-18</b>					
Laboratory ID:	10-062-11					
Gasoline	<b>ND</b>	5.6	NWTPH-Gx	10-9-17	10-10-17	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Fluorobenzene</i>	79	63-124				
<b>Client ID:</b>	<b>FL363-B6-6-7</b>					
Laboratory ID:	10-062-14					
Gasoline	<b>ND</b>	7.5	NWTPH-Gx	10-9-17	10-10-17	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Fluorobenzene</i>	72	63-124				
<b>Client ID:</b>	<b>FL363-B6-11-12</b>					
Laboratory ID:	10-062-15					
Gasoline	<b>ND</b>	8.6	NWTPH-Gx	10-9-17	10-10-17	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Fluorobenzene</i>	68	63-124				
<b>Client ID:</b>	<b>FL363-B6-17-18</b>					
Laboratory ID:	10-062-16					
Gasoline	<b>ND</b>	5.5	NWTPH-Gx	10-9-17	10-10-17	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Fluorobenzene</i>	78	63-124				
<b>Client ID:</b>	<b>FL363-B7-6-7</b>					
Laboratory ID:	10-062-19					
Gasoline	<b>ND</b>	5.3	NWTPH-Gx	10-9-17	10-10-17	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Fluorobenzene</i>	71	63-124				
<b>Client ID:</b>	<b>FL363-B7-10-11</b>					
Laboratory ID:	10-062-20					
Gasoline	<b>ND</b>	5.4	NWTPH-Gx	10-9-17	10-10-17	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Fluorobenzene</i>	77	63-124				



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**NWTPH-Gx**

Matrix: Soil  
 Units: mg/kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>FL363-B7-17-18</b>					
Laboratory ID:	10-062-21					
Gasoline	<b>ND</b>	4.9	NWTPH-Gx	10-9-17	10-10-17	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Fluorobenzene</i>	<i>84</i>	<i>63-124</i>				



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### NWTPH-Dx

Matrix: Soil  
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>FL363-B4-7-8</b>					
Laboratory ID:	10-062-03					
Diesel Range Organics	<b>74</b>	35	NWTPH-Dx	10-6-17	10-9-17	N
Lube Oil Range Organics	<b>500</b>	69	NWTPH-Dx	10-6-17	10-9-17	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	90	50-150				
<b>Client ID:</b>	<b>FL363-B4-11-12</b>					
Laboratory ID:	10-062-04					
Diesel Range Organics	<b>ND</b>	130	NWTPH-Dx	10-6-17	10-9-17	U1,M1
Lube Oil Range Organics	<b>ND</b>	58	NWTPH-Dx	10-6-17	10-9-17	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	74	50-150				
<b>Client ID:</b>	<b>FL363-B4-12-13</b>					
Laboratory ID:	10-062-05					
Diesel Range Organics	<b>ND</b>	200	NWTPH-Dx	10-6-17	10-9-17	U1,M1
Lube Oil Range Organics	<b>ND</b>	56	NWTPH-Dx	10-6-17	10-9-17	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	75	50-150				
<b>Client ID:</b>	<b>FL363-B4-17-18</b>					
Laboratory ID:	10-062-06					
Diesel Range Organics	<b>ND</b>	31	NWTPH-Dx	10-6-17	10-9-17	
Lube Oil	<b>98</b>	62	NWTPH-Dx	10-6-17	10-9-17	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	83	50-150				
<b>Client ID:</b>	<b>FL363-B5-5.5-6.5</b>					
Laboratory ID:	10-062-09					
Diesel Range Organics	<b>ND</b>	28	NWTPH-Dx	10-6-17	10-9-17	
Lube Oil Range Organics	<b>ND</b>	55	NWTPH-Dx	10-6-17	10-9-17	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	73	50-150				
<b>Client ID:</b>	<b>FL363-B5-11.5-12.5</b>					
Laboratory ID:	10-062-10					
Diesel Range Organics	<b>ND</b>	320	NWTPH-Dx	10-6-17	10-9-17	U1,M1
Lube Oil Range Organics	<b>ND</b>	60	NWTPH-Dx	10-6-17	10-9-17	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	81	50-150				



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### NWTPH-Dx

Matrix: Soil  
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>FL363-B5-17-18</b>					
Laboratory ID:	10-062-11					
Diesel Range Organics	ND	27	NWTPH-Dx	10-6-17	10-9-17	
Lube Oil Range Organics	ND	54	NWTPH-Dx	10-6-17	10-9-17	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	73	50-150				
<b>Client ID:</b>	<b>FL363-B6-6-7</b>					
Laboratory ID:	10-062-14					
Diesel Range Organics	ND	28	NWTPH-Dx	10-6-17	10-9-17	
Lube Oil Range Organics	63	55	NWTPH-Dx	10-6-17	10-9-17	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	72	50-150				
<b>Client ID:</b>	<b>FL363-B6-11-12</b>					
Laboratory ID:	10-062-15					
Diesel Range Organics	ND	36	NWTPH-Dx	10-6-17	10-9-17	
Lube Oil Range Organics	100	72	NWTPH-Dx	10-6-17	10-9-17	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	76	50-150				
<b>Client ID:</b>	<b>FL363-B6-17-18</b>					
Laboratory ID:	10-062-16					
Diesel Range Organics	ND	29	NWTPH-Dx	10-6-17	10-9-17	
Lube Oil Range Organics	ND	57	NWTPH-Dx	10-6-17	10-9-17	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	73	50-150				
<b>Client ID:</b>	<b>FL363-B7-6-7</b>					
Laboratory ID:	10-062-19					
Diesel Range Organics	ND	28	NWTPH-Dx	10-6-17	10-9-17	
Lube Oil Range Organics	ND	56	NWTPH-Dx	10-6-17	10-9-17	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	73	50-150				
<b>Client ID:</b>	<b>FL363-B7-10-11</b>					
Laboratory ID:	10-062-20					
Diesel Range Organics	ND	29	NWTPH-Dx	10-6-17	10-9-17	
Lube Oil Range Organics	ND	58	NWTPH-Dx	10-6-17	10-9-17	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	68	50-150				



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**NWTPH-Dx**

Matrix: Soil  
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>FL363-B7-17-18</b>					
Laboratory ID:	10-062-21					
Diesel Range Organics	<b>ND</b>	28	NWTPH-Dx	10-6-17	10-9-17	
Lube Oil Range Organics	<b>ND</b>	57	NWTPH-Dx	10-6-17	10-9-17	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	80	50-150				



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Matrix: Soil  
 Units: mg/kg

<b>Analyte</b>	<b>Result</b>	<b>PQL</b>	<b>Method</b>	<b>Date Prepared</b>	<b>Date Analyzed</b>	<b>Flags</b>
<b>Client ID:</b>	<b>FL363-B4-7-8</b>					
<b>Laboratory ID:</b>	10-062-03					
Dichlorodifluoromethane	ND	0.0029	EPA 8260C	10-9-17	10-9-17	
Chloromethane	ND	0.0080	EPA 8260C	10-9-17	10-9-17	
Vinyl Chloride	ND	0.0016	EPA 8260C	10-9-17	10-9-17	
Bromomethane	ND	0.0016	EPA 8260C	10-9-17	10-9-17	
Chloroethane	ND	0.0080	EPA 8260C	10-9-17	10-9-17	
Trichlorofluoromethane	ND	0.0016	EPA 8260C	10-9-17	10-9-17	
1,1-Dichloroethene	ND	0.0016	EPA 8260C	10-9-17	10-9-17	
Acetone	0.25	0.0080	EPA 8260C	10-9-17	10-9-17	
Iodomethane	ND	0.0080	EPA 8260C	10-9-17	10-9-17	
Carbon Disulfide	ND	0.0016	EPA 8260C	10-9-17	10-9-17	
Methylene Chloride	ND	0.016	EPA 8260C	10-9-17	10-9-17	
(trans) 1,2-Dichloroethene	ND	0.0016	EPA 8260C	10-9-17	10-9-17	
Methyl t-Butyl Ether	ND	0.0016	EPA 8260C	10-9-17	10-9-17	
1,1-Dichloroethane	ND	0.0016	EPA 8260C	10-9-17	10-9-17	
Vinyl Acetate	ND	0.0080	EPA 8260C	10-9-17	10-9-17	
2,2-Dichloropropane	ND	0.0016	EPA 8260C	10-9-17	10-9-17	
(cis) 1,2-Dichloroethene	ND	0.0016	EPA 8260C	10-9-17	10-9-17	
2-Butanone	0.058	0.0080	EPA 8260C	10-9-17	10-9-17	
Bromochloromethane	ND	0.0016	EPA 8260C	10-9-17	10-9-17	
Chloroform	ND	0.0016	EPA 8260C	10-9-17	10-9-17	
1,1,1-Trichloroethane	ND	0.0016	EPA 8260C	10-9-17	10-9-17	
Carbon Tetrachloride	ND	0.0016	EPA 8260C	10-9-17	10-9-17	
1,1-Dichloropropene	ND	0.0016	EPA 8260C	10-9-17	10-9-17	
Benzene	0.0035	0.0016	EPA 8260C	10-9-17	10-9-17	
1,2-Dichloroethane	ND	0.0016	EPA 8260C	10-9-17	10-9-17	
Trichloroethene	ND	0.0016	EPA 8260C	10-9-17	10-9-17	
1,2-Dichloropropane	ND	0.0016	EPA 8260C	10-9-17	10-9-17	
Dibromomethane	ND	0.0016	EPA 8260C	10-9-17	10-9-17	
Bromodichloromethane	ND	0.0016	EPA 8260C	10-9-17	10-9-17	
2-Chloroethyl Vinyl Ether	ND	0.0080	EPA 8260C	10-9-17	10-9-17	
(cis) 1,3-Dichloropropene	ND	0.0016	EPA 8260C	10-9-17	10-9-17	
Methyl Isobutyl Ketone	ND	0.0080	EPA 8260C	10-9-17	10-9-17	
Toluene	ND	0.0080	EPA 8260C	10-9-17	10-9-17	
(trans) 1,3-Dichloropropene	ND	0.0016	EPA 8260C	10-9-17	10-9-17	



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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>FL363-B4-7-8</b>					
Laboratory ID:	10-062-03					
1,1,2-Trichloroethane	ND	0.0016	EPA 8260C	10-9-17	10-9-17	
Tetrachloroethene	ND	0.0016	EPA 8260C	10-9-17	10-9-17	
1,3-Dichloropropane	ND	0.0016	EPA 8260C	10-9-17	10-9-17	
2-Hexanone	ND	0.0080	EPA 8260C	10-9-17	10-9-17	
Dibromochloromethane	ND	0.0016	EPA 8260C	10-9-17	10-9-17	
1,2-Dibromoethane	ND	0.0016	EPA 8260C	10-9-17	10-9-17	
Chlorobenzene	ND	0.0016	EPA 8260C	10-9-17	10-9-17	
1,1,1,2-Tetrachloroethane	ND	0.0016	EPA 8260C	10-9-17	10-9-17	
Ethylbenzene	ND	0.0016	EPA 8260C	10-9-17	10-9-17	
m,p-Xylene	0.049	0.0032	EPA 8260C	10-9-17	10-9-17	
o-Xylene	0.0017	0.0016	EPA 8260C	10-9-17	10-9-17	
Styrene	ND	0.0016	EPA 8260C	10-9-17	10-9-17	
Bromoform	ND	0.0080	EPA 8260C	10-9-17	10-9-17	
Isopropylbenzene	0.021	0.0016	EPA 8260C	10-9-17	10-9-17	
Bromobenzene	ND	0.0016	EPA 8260C	10-9-17	10-9-17	
1,1,2,2-Tetrachloroethane	ND	0.0016	EPA 8260C	10-9-17	10-9-17	
1,2,3-Trichloropropane	ND	0.0016	EPA 8260C	10-9-17	10-9-17	
n-Propylbenzene	0.076	0.0016	EPA 8260C	10-9-17	10-9-17	
2-Chlorotoluene	ND	0.0016	EPA 8260C	10-9-17	10-9-17	
4-Chlorotoluene	ND	0.0016	EPA 8260C	10-9-17	10-9-17	
1,3,5-Trimethylbenzene	0.022	0.0016	EPA 8260C	10-9-17	10-9-17	
tert-Butylbenzene	ND	0.0016	EPA 8260C	10-9-17	10-9-17	
1,2,4-Trimethylbenzene	0.053	0.0016	EPA 8260C	10-9-17	10-9-17	
sec-Butylbenzene	0.033	0.0016	EPA 8260C	10-9-17	10-9-17	
1,3-Dichlorobenzene	ND	0.0016	EPA 8260C	10-9-17	10-9-17	
p-Isopropyltoluene	0.021	0.0016	EPA 8260C	10-9-17	10-9-17	
1,4-Dichlorobenzene	ND	0.0016	EPA 8260C	10-9-17	10-9-17	
1,2-Dichlorobenzene	ND	0.0016	EPA 8260C	10-9-17	10-9-17	
n-Butylbenzene	0.027	0.0016	EPA 8260C	10-9-17	10-9-17	
1,2-Dibromo-3-chloropropane	ND	0.0080	EPA 8260C	10-9-17	10-9-17	
1,2,4-Trichlorobenzene	ND	0.0016	EPA 8260C	10-9-17	10-9-17	
Hexachlorobutadiene	ND	0.0080	EPA 8260C	10-9-17	10-9-17	
Naphthalene	0.0030	0.0016	EPA 8260C	10-9-17	10-9-17	
1,2,3-Trichlorobenzene	ND	0.0016	EPA 8260C	10-9-17	10-9-17	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>122</i>	<i>73-134</i>				
<i>Toluene-d8</i>	<i>134</i>	<i>81-124</i>				
<i>4-Bromofluorobenzene</i>	<i>120</i>	<i>80-131</i>				

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Matrix: Soil  
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>FL363-B4-11-12</b>					
Laboratory ID:	10-062-04					
Dichlorodifluoromethane	ND	0.10	EPA 8260C	10-9-17	10-9-17	
Chloromethane	ND	0.29	EPA 8260C	10-9-17	10-9-17	
Vinyl Chloride	ND	0.058	EPA 8260C	10-9-17	10-9-17	
Bromomethane	ND	0.058	EPA 8260C	10-9-17	10-9-17	
Chloroethane	ND	0.29	EPA 8260C	10-9-17	10-9-17	
Trichlorofluoromethane	ND	0.058	EPA 8260C	10-9-17	10-9-17	
1,1-Dichloroethene	ND	0.058	EPA 8260C	10-9-17	10-9-17	
Acetone	ND	0.29	EPA 8260C	10-9-17	10-9-17	
Iodomethane	ND	0.29	EPA 8260C	10-9-17	10-9-17	
Carbon Disulfide	ND	0.058	EPA 8260C	10-9-17	10-9-17	
Methylene Chloride	ND	0.58	EPA 8260C	10-9-17	10-9-17	
(trans) 1,2-Dichloroethene	ND	0.058	EPA 8260C	10-9-17	10-9-17	
Methyl t-Butyl Ether	ND	0.058	EPA 8260C	10-9-17	10-9-17	
1,1-Dichloroethane	ND	0.058	EPA 8260C	10-9-17	10-9-17	
Vinyl Acetate	ND	0.29	EPA 8260C	10-9-17	10-9-17	
2,2-Dichloropropane	ND	0.058	EPA 8260C	10-9-17	10-9-17	
(cis) 1,2-Dichloroethene	ND	0.058	EPA 8260C	10-9-17	10-9-17	
2-Butanone	ND	0.29	EPA 8260C	10-9-17	10-9-17	
Bromochloromethane	ND	0.058	EPA 8260C	10-9-17	10-9-17	
Chloroform	ND	0.058	EPA 8260C	10-9-17	10-9-17	
1,1,1-Trichloroethane	ND	0.058	EPA 8260C	10-9-17	10-9-17	
Carbon Tetrachloride	ND	0.058	EPA 8260C	10-9-17	10-9-17	
1,1-Dichloropropene	ND	0.058	EPA 8260C	10-9-17	10-9-17	
Benzene	ND	0.058	EPA 8260C	10-9-17	10-9-17	
1,2-Dichloroethane	ND	0.058	EPA 8260C	10-9-17	10-9-17	
Trichloroethene	ND	0.058	EPA 8260C	10-9-17	10-9-17	
1,2-Dichloropropane	ND	0.058	EPA 8260C	10-9-17	10-9-17	
Dibromomethane	ND	0.058	EPA 8260C	10-9-17	10-9-17	
Bromodichloromethane	ND	0.058	EPA 8260C	10-9-17	10-9-17	
2-Chloroethyl Vinyl Ether	ND	0.29	EPA 8260C	10-9-17	10-9-17	
(cis) 1,3-Dichloropropene	ND	0.058	EPA 8260C	10-9-17	10-9-17	
Methyl Isobutyl Ketone	ND	0.29	EPA 8260C	10-9-17	10-9-17	
Toluene	ND	0.29	EPA 8260C	10-9-17	10-9-17	
(trans) 1,3-Dichloropropene	ND	0.058	EPA 8260C	10-9-17	10-9-17	



Date of Report: October 12, 2017  
 Samples Submitted: October 5, 2017  
 Laboratory Reference: 1710-062  
 Project: 4082-039-01

**VOLATILES EPA 8260C**  
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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>FL363-B4-11-12</b>					
Laboratory ID:	10-062-04					
1,1,2-Trichloroethane	ND	0.058	EPA 8260C	10-9-17	10-9-17	
Tetrachloroethene	ND	0.058	EPA 8260C	10-9-17	10-9-17	
1,3-Dichloropropane	ND	0.058	EPA 8260C	10-9-17	10-9-17	
2-Hexanone	ND	0.29	EPA 8260C	10-9-17	10-9-17	
Dibromochloromethane	ND	0.058	EPA 8260C	10-9-17	10-9-17	
1,2-Dibromoethane	ND	0.058	EPA 8260C	10-9-17	10-9-17	
Chlorobenzene	ND	0.058	EPA 8260C	10-9-17	10-9-17	
1,1,1,2-Tetrachloroethane	ND	0.058	EPA 8260C	10-9-17	10-9-17	
Ethylbenzene	ND	0.058	EPA 8260C	10-9-17	10-9-17	
m,p-Xylene	ND	0.12	EPA 8260C	10-9-17	10-9-17	
o-Xylene	ND	0.058	EPA 8260C	10-9-17	10-9-17	
Styrene	ND	0.058	EPA 8260C	10-9-17	10-9-17	
Bromoform	ND	0.29	EPA 8260C	10-9-17	10-9-17	
Isopropylbenzene	ND	0.058	EPA 8260C	10-9-17	10-9-17	
Bromobenzene	ND	0.058	EPA 8260C	10-9-17	10-9-17	
1,1,2,2-Tetrachloroethane	ND	0.058	EPA 8260C	10-9-17	10-9-17	
1,2,3-Trichloropropane	ND	0.058	EPA 8260C	10-9-17	10-9-17	
n-Propylbenzene	ND	0.058	EPA 8260C	10-9-17	10-9-17	
2-Chlorotoluene	ND	0.058	EPA 8260C	10-9-17	10-9-17	
4-Chlorotoluene	ND	0.058	EPA 8260C	10-9-17	10-9-17	
1,3,5-Trimethylbenzene	ND	0.058	EPA 8260C	10-9-17	10-9-17	
tert-Butylbenzene	ND	0.058	EPA 8260C	10-9-17	10-9-17	
1,2,4-Trimethylbenzene	ND	0.058	EPA 8260C	10-9-17	10-9-17	
sec-Butylbenzene	ND	0.058	EPA 8260C	10-9-17	10-9-17	
1,3-Dichlorobenzene	ND	0.058	EPA 8260C	10-9-17	10-9-17	
p-Isopropyltoluene	ND	0.058	EPA 8260C	10-9-17	10-9-17	
1,4-Dichlorobenzene	ND	0.058	EPA 8260C	10-9-17	10-9-17	
1,2-Dichlorobenzene	ND	0.058	EPA 8260C	10-9-17	10-9-17	
n-Butylbenzene	ND	0.058	EPA 8260C	10-9-17	10-9-17	
1,2-Dibromo-3-chloropropane	ND	0.29	EPA 8260C	10-9-17	10-9-17	
1,2,4-Trichlorobenzene	ND	0.058	EPA 8260C	10-9-17	10-9-17	
Hexachlorobutadiene	ND	0.29	EPA 8260C	10-9-17	10-9-17	
Naphthalene	ND	0.058	EPA 8260C	10-9-17	10-9-17	
1,2,3-Trichlorobenzene	ND	0.058	EPA 8260C	10-9-17	10-9-17	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>104</i>	<i>73-134</i>				
<i>Toluene-d8</i>	<i>109</i>	<i>81-124</i>				
<i>4-Bromofluorobenzene</i>	<i>119</i>	<i>80-131</i>				



Date of Report: October 12, 2017  
 Samples Submitted: October 5, 2017  
 Laboratory Reference: 1710-062  
 Project: 4082-039-01

**VOLATILES EPA 8260C**  
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Matrix: Soil  
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>FL363-B4-12-13</b>					
Laboratory ID:	10-062-05					
Dichlorodifluoromethane	ND	0.082	EPA 8260C	10-9-17	10-9-17	
Chloromethane	ND	0.23	EPA 8260C	10-9-17	10-9-17	
Vinyl Chloride	ND	0.046	EPA 8260C	10-9-17	10-9-17	
Bromomethane	ND	0.046	EPA 8260C	10-9-17	10-9-17	
Chloroethane	ND	0.23	EPA 8260C	10-9-17	10-9-17	
Trichlorofluoromethane	ND	0.046	EPA 8260C	10-9-17	10-9-17	
1,1-Dichloroethene	ND	0.046	EPA 8260C	10-9-17	10-9-17	
Acetone	ND	0.23	EPA 8260C	10-9-17	10-9-17	
Iodomethane	ND	0.23	EPA 8260C	10-9-17	10-9-17	
Carbon Disulfide	ND	0.046	EPA 8260C	10-9-17	10-9-17	
Methylene Chloride	ND	0.46	EPA 8260C	10-9-17	10-9-17	
(trans) 1,2-Dichloroethene	ND	0.046	EPA 8260C	10-9-17	10-9-17	
Methyl t-Butyl Ether	ND	0.046	EPA 8260C	10-9-17	10-9-17	
1,1-Dichloroethane	ND	0.046	EPA 8260C	10-9-17	10-9-17	
Vinyl Acetate	ND	0.23	EPA 8260C	10-9-17	10-9-17	
2,2-Dichloropropane	ND	0.046	EPA 8260C	10-9-17	10-9-17	
(cis) 1,2-Dichloroethene	ND	0.046	EPA 8260C	10-9-17	10-9-17	
2-Butanone	ND	0.23	EPA 8260C	10-9-17	10-9-17	
Bromochloromethane	ND	0.046	EPA 8260C	10-9-17	10-9-17	
Chloroform	ND	0.046	EPA 8260C	10-9-17	10-9-17	
1,1,1-Trichloroethane	ND	0.046	EPA 8260C	10-9-17	10-9-17	
Carbon Tetrachloride	ND	0.046	EPA 8260C	10-9-17	10-9-17	
1,1-Dichloropropene	ND	0.046	EPA 8260C	10-9-17	10-9-17	
Benzene	ND	0.046	EPA 8260C	10-9-17	10-9-17	
1,2-Dichloroethane	ND	0.046	EPA 8260C	10-9-17	10-9-17	
Trichloroethene	ND	0.046	EPA 8260C	10-9-17	10-9-17	
1,2-Dichloropropane	ND	0.046	EPA 8260C	10-9-17	10-9-17	
Dibromomethane	ND	0.046	EPA 8260C	10-9-17	10-9-17	
Bromodichloromethane	ND	0.046	EPA 8260C	10-9-17	10-9-17	
2-Chloroethyl Vinyl Ether	ND	0.23	EPA 8260C	10-9-17	10-9-17	
(cis) 1,3-Dichloropropene	ND	0.046	EPA 8260C	10-9-17	10-9-17	
Methyl Isobutyl Ketone	ND	0.23	EPA 8260C	10-9-17	10-9-17	
Toluene	ND	0.23	EPA 8260C	10-9-17	10-9-17	
(trans) 1,3-Dichloropropene	ND	0.046	EPA 8260C	10-9-17	10-9-17	



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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>FL363-B4-12-13</b>					
Laboratory ID:	10-062-05					
1,1,2-Trichloroethane	ND	0.046	EPA 8260C	10-9-17	10-9-17	
Tetrachloroethene	ND	0.046	EPA 8260C	10-9-17	10-9-17	
1,3-Dichloropropane	ND	0.046	EPA 8260C	10-9-17	10-9-17	
2-Hexanone	ND	0.23	EPA 8260C	10-9-17	10-9-17	
Dibromochloromethane	ND	0.046	EPA 8260C	10-9-17	10-9-17	
1,2-Dibromoethane	ND	0.046	EPA 8260C	10-9-17	10-9-17	
Chlorobenzene	ND	0.046	EPA 8260C	10-9-17	10-9-17	
1,1,1,2-Tetrachloroethane	ND	0.046	EPA 8260C	10-9-17	10-9-17	
Ethylbenzene	3.7	0.046	EPA 8260C	10-9-17	10-9-17	
m,p-Xylene	20	1.8	EPA 8260C	10-9-17	10-10-17	
o-Xylene	2.8	0.046	EPA 8260C	10-9-17	10-9-17	
Styrene	ND	0.046	EPA 8260C	10-9-17	10-9-17	
Bromoform	ND	0.23	EPA 8260C	10-9-17	10-9-17	
Isopropylbenzene	0.98	0.046	EPA 8260C	10-9-17	10-9-17	
Bromobenzene	ND	0.046	EPA 8260C	10-9-17	10-9-17	
1,1,2,2-Tetrachloroethane	ND	0.046	EPA 8260C	10-9-17	10-9-17	
1,2,3-Trichloropropane	ND	0.046	EPA 8260C	10-9-17	10-9-17	
n-Propylbenzene	5.1	0.046	EPA 8260C	10-9-17	10-9-17	
2-Chlorotoluene	ND	0.046	EPA 8260C	10-9-17	10-9-17	
4-Chlorotoluene	ND	0.046	EPA 8260C	10-9-17	10-9-17	
1,3,5-Trimethylbenzene	18	0.91	EPA 8260C	10-9-17	10-10-17	
tert-Butylbenzene	ND	0.046	EPA 8260C	10-9-17	10-9-17	
1,2,4-Trimethylbenzene	47	0.91	EPA 8260C	10-9-17	10-10-17	
sec-Butylbenzene	1.1	0.046	EPA 8260C	10-9-17	10-9-17	
1,3-Dichlorobenzene	ND	0.046	EPA 8260C	10-9-17	10-9-17	
p-Isopropyltoluene	0.63	0.046	EPA 8260C	10-9-17	10-9-17	
1,4-Dichlorobenzene	ND	0.046	EPA 8260C	10-9-17	10-9-17	
1,2-Dichlorobenzene	ND	0.046	EPA 8260C	10-9-17	10-9-17	
n-Butylbenzene	6.8	0.046	EPA 8260C	10-9-17	10-9-17	
1,2-Dibromo-3-chloropropane	ND	0.23	EPA 8260C	10-9-17	10-9-17	
1,2,4-Trichlorobenzene	ND	0.046	EPA 8260C	10-9-17	10-9-17	
Hexachlorobutadiene	ND	0.23	EPA 8260C	10-9-17	10-9-17	
Naphthalene	4.3	0.046	EPA 8260C	10-9-17	10-9-17	
1,2,3-Trichlorobenzene	ND	0.046	EPA 8260C	10-9-17	10-9-17	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>102</i>	<i>73-134</i>				
<i>Toluene-d8</i>	<i>115</i>	<i>81-124</i>				
<i>4-Bromofluorobenzene</i>	<i>127</i>	<i>80-131</i>				



Date of Report: October 12, 2017  
 Samples Submitted: October 5, 2017  
 Laboratory Reference: 1710-062  
 Project: 4082-039-01

**VOLATILES EPA 8260C**  
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Matrix: Soil  
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>FL363-B4-17-18</b>					
Laboratory ID:	10-062-06					
Dichlorodifluoromethane	ND	0.0021	EPA 8260C	10-10-17	10-10-17	
Chloromethane	ND	0.0063	EPA 8260C	10-10-17	10-10-17	
Vinyl Chloride	ND	0.00097	EPA 8260C	10-10-17	10-10-17	
Bromomethane	ND	0.00097	EPA 8260C	10-10-17	10-10-17	
Chloroethane	ND	0.0048	EPA 8260C	10-10-17	10-10-17	
Trichlorofluoromethane	ND	0.00097	EPA 8260C	10-10-17	10-10-17	
1,1-Dichloroethene	ND	0.00097	EPA 8260C	10-10-17	10-10-17	
Acetone	0.028	0.0048	EPA 8260C	10-10-17	10-10-17	
Iodomethane	ND	0.0067	EPA 8260C	10-10-17	10-10-17	
Carbon Disulfide	ND	0.00097	EPA 8260C	10-10-17	10-10-17	
Methylene Chloride	ND	0.0097	EPA 8260C	10-10-17	10-10-17	
(trans) 1,2-Dichloroethene	ND	0.00097	EPA 8260C	10-10-17	10-10-17	
Methyl t-Butyl Ether	ND	0.00097	EPA 8260C	10-10-17	10-10-17	
1,1-Dichloroethane	ND	0.00097	EPA 8260C	10-10-17	10-10-17	
Vinyl Acetate	ND	0.0048	EPA 8260C	10-10-17	10-10-17	
2,2-Dichloropropane	ND	0.00097	EPA 8260C	10-10-17	10-10-17	
(cis) 1,2-Dichloroethene	ND	0.00097	EPA 8260C	10-10-17	10-10-17	
2-Butanone	ND	0.0048	EPA 8260C	10-10-17	10-10-17	
Bromochloromethane	ND	0.00097	EPA 8260C	10-10-17	10-10-17	
Chloroform	ND	0.00097	EPA 8260C	10-10-17	10-10-17	
1,1,1-Trichloroethane	ND	0.00097	EPA 8260C	10-10-17	10-10-17	
Carbon Tetrachloride	ND	0.00097	EPA 8260C	10-10-17	10-10-17	
1,1-Dichloropropene	ND	0.00097	EPA 8260C	10-10-17	10-10-17	
Benzene	ND	0.00097	EPA 8260C	10-10-17	10-10-17	
1,2-Dichloroethane	ND	0.00097	EPA 8260C	10-10-17	10-10-17	
Trichloroethene	ND	0.00097	EPA 8260C	10-10-17	10-10-17	
1,2-Dichloropropane	ND	0.00097	EPA 8260C	10-10-17	10-10-17	
Dibromomethane	ND	0.00097	EPA 8260C	10-10-17	10-10-17	
Bromodichloromethane	ND	0.00097	EPA 8260C	10-10-17	10-10-17	
2-Chloroethyl Vinyl Ether	ND	0.0048	EPA 8260C	10-10-17	10-10-17	
(cis) 1,3-Dichloropropene	ND	0.00097	EPA 8260C	10-10-17	10-10-17	
Methyl Isobutyl Ketone	ND	0.0048	EPA 8260C	10-10-17	10-10-17	
Toluene	ND	0.0048	EPA 8260C	10-10-17	10-10-17	
(trans) 1,3-Dichloropropene	ND	0.00097	EPA 8260C	10-10-17	10-10-17	



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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>FL363-B4-17-18</b>					
Laboratory ID:	10-062-06					
1,1,2-Trichloroethane	ND	0.00097	EPA 8260C	10-10-17	10-10-17	
Tetrachloroethene	ND	0.00097	EPA 8260C	10-10-17	10-10-17	
1,3-Dichloropropane	ND	0.00097	EPA 8260C	10-10-17	10-10-17	
2-Hexanone	ND	0.0048	EPA 8260C	10-10-17	10-10-17	
Dibromochloromethane	ND	0.00097	EPA 8260C	10-10-17	10-10-17	
1,2-Dibromoethane	ND	0.00097	EPA 8260C	10-10-17	10-10-17	
Chlorobenzene	ND	0.00097	EPA 8260C	10-10-17	10-10-17	
1,1,1,2-Tetrachloroethane	ND	0.00097	EPA 8260C	10-10-17	10-10-17	
Ethylbenzene	0.0046	0.00097	EPA 8260C	10-10-17	10-10-17	
m,p-Xylene	0.011	0.0019	EPA 8260C	10-10-17	10-10-17	
o-Xylene	0.0022	0.00097	EPA 8260C	10-10-17	10-10-17	
Styrene	ND	0.00097	EPA 8260C	10-10-17	10-10-17	
Bromoform	ND	0.0048	EPA 8260C	10-10-17	10-10-17	
Isopropylbenzene	0.0011	0.00097	EPA 8260C	10-10-17	10-10-17	
Bromobenzene	ND	0.00097	EPA 8260C	10-10-17	10-10-17	
1,1,2,2-Tetrachloroethane	ND	0.00097	EPA 8260C	10-10-17	10-10-17	
1,2,3-Trichloropropane	ND	0.00097	EPA 8260C	10-10-17	10-10-17	
n-Propylbenzene	0.0067	0.00097	EPA 8260C	10-10-17	10-10-17	
2-Chlorotoluene	ND	0.00097	EPA 8260C	10-10-17	10-10-17	
4-Chlorotoluene	ND	0.00097	EPA 8260C	10-10-17	10-10-17	
1,3,5-Trimethylbenzene	0.0024	0.00097	EPA 8260C	10-10-17	10-10-17	
tert-Butylbenzene	ND	0.00097	EPA 8260C	10-10-17	10-10-17	
1,2,4-Trimethylbenzene	0.015	0.00097	EPA 8260C	10-10-17	10-10-17	
sec-Butylbenzene	ND	0.00097	EPA 8260C	10-10-17	10-10-17	
1,3-Dichlorobenzene	ND	0.00097	EPA 8260C	10-10-17	10-10-17	
p-Isopropyltoluene	ND	0.00097	EPA 8260C	10-10-17	10-10-17	
1,4-Dichlorobenzene	ND	0.00097	EPA 8260C	10-10-17	10-10-17	
1,2-Dichlorobenzene	ND	0.00097	EPA 8260C	10-10-17	10-10-17	
n-Butylbenzene	0.0028	0.00097	EPA 8260C	10-10-17	10-10-17	Y
1,2-Dibromo-3-chloropropane	ND	0.0048	EPA 8260C	10-10-17	10-10-17	
1,2,4-Trichlorobenzene	ND	0.00097	EPA 8260C	10-10-17	10-10-17	
Hexachlorobutadiene	ND	0.0048	EPA 8260C	10-10-17	10-10-17	
Naphthalene	0.0078	0.00097	EPA 8260C	10-10-17	10-10-17	
1,2,3-Trichlorobenzene	ND	0.00097	EPA 8260C	10-10-17	10-10-17	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>88</i>	<i>73-134</i>				
<i>Toluene-d8</i>	<i>95</i>	<i>81-124</i>				
<i>4-Bromofluorobenzene</i>	<i>106</i>	<i>80-131</i>				



Date of Report: October 12, 2017  
 Samples Submitted: October 5, 2017  
 Laboratory Reference: 1710-062  
 Project: 4082-039-01

**VOLATILES EPA 8260C**  
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Matrix: Soil  
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>FL363-B5-5.5-6.5</b>					
Laboratory ID:	10-062-09					
Dichlorodifluoromethane	ND	0.0027	EPA 8260C	10-10-17	10-10-17	
Chloromethane	ND	0.0079	EPA 8260C	10-10-17	10-10-17	
Vinyl Chloride	ND	0.0012	EPA 8260C	10-10-17	10-10-17	
Bromomethane	ND	0.0012	EPA 8260C	10-10-17	10-10-17	
Chloroethane	ND	0.0061	EPA 8260C	10-10-17	10-10-17	
Trichlorofluoromethane	ND	0.0012	EPA 8260C	10-10-17	10-10-17	
1,1-Dichloroethene	ND	0.0012	EPA 8260C	10-10-17	10-10-17	
Acetone	0.21	0.0061	EPA 8260C	10-10-17	10-10-17	
Iodomethane	ND	0.0084	EPA 8260C	10-10-17	10-10-17	
Carbon Disulfide	ND	0.0012	EPA 8260C	10-10-17	10-10-17	
Methylene Chloride	ND	0.012	EPA 8260C	10-10-17	10-10-17	
(trans) 1,2-Dichloroethene	ND	0.0012	EPA 8260C	10-10-17	10-10-17	
Methyl t-Butyl Ether	ND	0.0012	EPA 8260C	10-10-17	10-10-17	
1,1-Dichloroethane	ND	0.0012	EPA 8260C	10-10-17	10-10-17	
Vinyl Acetate	ND	0.0061	EPA 8260C	10-10-17	10-10-17	
2,2-Dichloropropane	ND	0.0012	EPA 8260C	10-10-17	10-10-17	
(cis) 1,2-Dichloroethene	ND	0.0012	EPA 8260C	10-10-17	10-10-17	
2-Butanone	0.015	0.0061	EPA 8260C	10-10-17	10-10-17	
Bromochloromethane	ND	0.0012	EPA 8260C	10-10-17	10-10-17	
Chloroform	ND	0.0012	EPA 8260C	10-10-17	10-10-17	
1,1,1-Trichloroethane	ND	0.0012	EPA 8260C	10-10-17	10-10-17	
Carbon Tetrachloride	ND	0.0012	EPA 8260C	10-10-17	10-10-17	
1,1-Dichloropropene	ND	0.0012	EPA 8260C	10-10-17	10-10-17	
Benzene	ND	0.0012	EPA 8260C	10-10-17	10-10-17	
1,2-Dichloroethane	ND	0.0012	EPA 8260C	10-10-17	10-10-17	
Trichloroethene	ND	0.0012	EPA 8260C	10-10-17	10-10-17	
1,2-Dichloropropane	ND	0.0012	EPA 8260C	10-10-17	10-10-17	
Dibromomethane	ND	0.0012	EPA 8260C	10-10-17	10-10-17	
Bromodichloromethane	ND	0.0012	EPA 8260C	10-10-17	10-10-17	
2-Chloroethyl Vinyl Ether	ND	0.0061	EPA 8260C	10-10-17	10-10-17	
(cis) 1,3-Dichloropropene	ND	0.0012	EPA 8260C	10-10-17	10-10-17	
Methyl Isobutyl Ketone	ND	0.0061	EPA 8260C	10-10-17	10-10-17	
Toluene	ND	0.0061	EPA 8260C	10-10-17	10-10-17	
(trans) 1,3-Dichloropropene	ND	0.0012	EPA 8260C	10-10-17	10-10-17	



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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>FL363-B5-5.5-6.5</b>					
Laboratory ID:	10-062-09					
1,1,2-Trichloroethane	ND	0.0012	EPA 8260C	10-10-17	10-10-17	
Tetrachloroethene	ND	0.0012	EPA 8260C	10-10-17	10-10-17	
1,3-Dichloropropane	ND	0.0012	EPA 8260C	10-10-17	10-10-17	
2-Hexanone	ND	0.0061	EPA 8260C	10-10-17	10-10-17	
Dibromochloromethane	ND	0.0012	EPA 8260C	10-10-17	10-10-17	
1,2-Dibromoethane	ND	0.0012	EPA 8260C	10-10-17	10-10-17	
Chlorobenzene	ND	0.0012	EPA 8260C	10-10-17	10-10-17	
1,1,1,2-Tetrachloroethane	ND	0.0012	EPA 8260C	10-10-17	10-10-17	
Ethylbenzene	0.0027	0.0012	EPA 8260C	10-10-17	10-10-17	
m,p-Xylene	0.012	0.0024	EPA 8260C	10-10-17	10-10-17	
o-Xylene	0.0037	0.0012	EPA 8260C	10-10-17	10-10-17	
Styrene	ND	0.0012	EPA 8260C	10-10-17	10-10-17	
Bromoform	ND	0.0061	EPA 8260C	10-10-17	10-10-17	
Isopropylbenzene	ND	0.0012	EPA 8260C	10-10-17	10-10-17	
Bromobenzene	ND	0.0012	EPA 8260C	10-10-17	10-10-17	
1,1,2,2-Tetrachloroethane	ND	0.0012	EPA 8260C	10-10-17	10-10-17	
1,2,3-Trichloropropane	ND	0.0012	EPA 8260C	10-10-17	10-10-17	
n-Propylbenzene	ND	0.0012	EPA 8260C	10-10-17	10-10-17	
2-Chlorotoluene	ND	0.0012	EPA 8260C	10-10-17	10-10-17	
4-Chlorotoluene	ND	0.0012	EPA 8260C	10-10-17	10-10-17	
1,3,5-Trimethylbenzene	ND	0.0012	EPA 8260C	10-10-17	10-10-17	
tert-Butylbenzene	ND	0.0012	EPA 8260C	10-10-17	10-10-17	
1,2,4-Trimethylbenzene	0.0025	0.0012	EPA 8260C	10-10-17	10-10-17	
sec-Butylbenzene	ND	0.0012	EPA 8260C	10-10-17	10-10-17	
1,3-Dichlorobenzene	ND	0.0012	EPA 8260C	10-10-17	10-10-17	
p-Isopropyltoluene	ND	0.0012	EPA 8260C	10-10-17	10-10-17	
1,4-Dichlorobenzene	ND	0.0012	EPA 8260C	10-10-17	10-10-17	
1,2-Dichlorobenzene	ND	0.0012	EPA 8260C	10-10-17	10-10-17	
n-Butylbenzene	ND	0.0012	EPA 8260C	10-10-17	10-10-17	
1,2-Dibromo-3-chloropropane	ND	0.0061	EPA 8260C	10-10-17	10-10-17	
1,2,4-Trichlorobenzene	ND	0.0012	EPA 8260C	10-10-17	10-10-17	
Hexachlorobutadiene	ND	0.0061	EPA 8260C	10-10-17	10-10-17	
Naphthalene	ND	0.0012	EPA 8260C	10-10-17	10-10-17	
1,2,3-Trichlorobenzene	ND	0.0012	EPA 8260C	10-10-17	10-10-17	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>123</i>	<i>73-134</i>				
<i>Toluene-d8</i>	<i>110</i>	<i>81-124</i>				
<i>4-Bromofluorobenzene</i>	<i>122</i>	<i>80-131</i>				



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Matrix: Soil  
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>FL363-B5-11.5-12.5</b>					
Laboratory ID:	10-062-10					
Dichlorodifluoromethane	ND	0.11	EPA 8260C	10-9-17	10-9-17	
Chloromethane	ND	0.30	EPA 8260C	10-9-17	10-9-17	
Vinyl Chloride	ND	0.061	EPA 8260C	10-9-17	10-9-17	
Bromomethane	ND	0.061	EPA 8260C	10-9-17	10-9-17	
Chloroethane	ND	0.30	EPA 8260C	10-9-17	10-9-17	
Trichlorofluoromethane	ND	0.061	EPA 8260C	10-9-17	10-9-17	
1,1-Dichloroethene	ND	0.061	EPA 8260C	10-9-17	10-9-17	
Acetone	ND	0.30	EPA 8260C	10-9-17	10-9-17	
Iodomethane	ND	0.30	EPA 8260C	10-9-17	10-9-17	
Carbon Disulfide	ND	0.061	EPA 8260C	10-9-17	10-9-17	
Methylene Chloride	ND	0.61	EPA 8260C	10-9-17	10-9-17	
(trans) 1,2-Dichloroethene	ND	0.061	EPA 8260C	10-9-17	10-9-17	
Methyl t-Butyl Ether	ND	0.061	EPA 8260C	10-9-17	10-9-17	
1,1-Dichloroethane	ND	0.061	EPA 8260C	10-9-17	10-9-17	
Vinyl Acetate	ND	0.30	EPA 8260C	10-9-17	10-9-17	
2,2-Dichloropropane	ND	0.061	EPA 8260C	10-9-17	10-9-17	
(cis) 1,2-Dichloroethene	ND	0.061	EPA 8260C	10-9-17	10-9-17	
2-Butanone	ND	0.30	EPA 8260C	10-9-17	10-9-17	
Bromochloromethane	ND	0.061	EPA 8260C	10-9-17	10-9-17	
Chloroform	ND	0.061	EPA 8260C	10-9-17	10-9-17	
1,1,1-Trichloroethane	ND	0.061	EPA 8260C	10-9-17	10-9-17	
Carbon Tetrachloride	ND	0.061	EPA 8260C	10-9-17	10-9-17	
1,1-Dichloropropene	ND	0.061	EPA 8260C	10-9-17	10-9-17	
Benzene	ND	0.061	EPA 8260C	10-9-17	10-9-17	
1,2-Dichloroethane	ND	0.061	EPA 8260C	10-9-17	10-9-17	
Trichloroethene	ND	0.061	EPA 8260C	10-9-17	10-9-17	
1,2-Dichloropropane	ND	0.061	EPA 8260C	10-9-17	10-9-17	
Dibromomethane	ND	0.061	EPA 8260C	10-9-17	10-9-17	
Bromodichloromethane	ND	0.061	EPA 8260C	10-9-17	10-9-17	
2-Chloroethyl Vinyl Ether	ND	0.30	EPA 8260C	10-9-17	10-9-17	
(cis) 1,3-Dichloropropene	ND	0.061	EPA 8260C	10-9-17	10-9-17	
Methyl Isobutyl Ketone	ND	0.30	EPA 8260C	10-9-17	10-9-17	
Toluene	ND	0.30	EPA 8260C	10-9-17	10-9-17	
(trans) 1,3-Dichloropropene	ND	0.061	EPA 8260C	10-9-17	10-9-17	



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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>FL363-B5-11.5-12.5</b>					
Laboratory ID:	10-062-10					
1,1,2-Trichloroethane	ND	0.061	EPA 8260C	10-9-17	10-9-17	
Tetrachloroethene	ND	0.061	EPA 8260C	10-9-17	10-9-17	
1,3-Dichloropropane	ND	0.061	EPA 8260C	10-9-17	10-9-17	
2-Hexanone	ND	0.30	EPA 8260C	10-9-17	10-9-17	
Dibromochloromethane	ND	0.061	EPA 8260C	10-9-17	10-9-17	
1,2-Dibromoethane	ND	0.061	EPA 8260C	10-9-17	10-9-17	
Chlorobenzene	ND	0.061	EPA 8260C	10-9-17	10-9-17	
1,1,1,2-Tetrachloroethane	ND	0.061	EPA 8260C	10-9-17	10-9-17	
Ethylbenzene	11	0.061	EPA 8260C	10-9-17	10-9-17	
m,p-Xylene	0.80	0.12	EPA 8260C	10-9-17	10-9-17	
o-Xylene	0.069	0.061	EPA 8260C	10-9-17	10-9-17	
Styrene	ND	0.061	EPA 8260C	10-9-17	10-9-17	
Bromoform	ND	0.30	EPA 8260C	10-9-17	10-9-17	
Isopropylbenzene	1.5	0.061	EPA 8260C	10-9-17	10-9-17	
Bromobenzene	ND	0.061	EPA 8260C	10-9-17	10-9-17	
1,1,2,2-Tetrachloroethane	ND	0.061	EPA 8260C	10-9-17	10-9-17	
1,2,3-Trichloropropane	ND	0.061	EPA 8260C	10-9-17	10-9-17	
n-Propylbenzene	6.2	0.061	EPA 8260C	10-9-17	10-9-17	
2-Chlorotoluene	ND	0.061	EPA 8260C	10-9-17	10-9-17	
4-Chlorotoluene	ND	0.061	EPA 8260C	10-9-17	10-9-17	
1,3,5-Trimethylbenzene	0.39	0.061	EPA 8260C	10-9-17	10-9-17	
tert-Butylbenzene	ND	0.061	EPA 8260C	10-9-17	10-9-17	
1,2,4-Trimethylbenzene	3.8	0.061	EPA 8260C	10-9-17	10-9-17	
sec-Butylbenzene	0.86	0.061	EPA 8260C	10-9-17	10-9-17	
1,3-Dichlorobenzene	ND	0.061	EPA 8260C	10-9-17	10-9-17	
p-Isopropyltoluene	0.23	0.061	EPA 8260C	10-9-17	10-9-17	
1,4-Dichlorobenzene	ND	0.061	EPA 8260C	10-9-17	10-9-17	
1,2-Dichlorobenzene	ND	0.061	EPA 8260C	10-9-17	10-9-17	
n-Butylbenzene	3.2	0.061	EPA 8260C	10-9-17	10-9-17	
1,2-Dibromo-3-chloropropane	ND	0.30	EPA 8260C	10-9-17	10-9-17	
1,2,4-Trichlorobenzene	ND	0.061	EPA 8260C	10-9-17	10-9-17	
Hexachlorobutadiene	ND	0.30	EPA 8260C	10-9-17	10-9-17	
Naphthalene	3.5	0.061	EPA 8260C	10-9-17	10-9-17	
1,2,3-Trichlorobenzene	ND	0.061	EPA 8260C	10-9-17	10-9-17	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>100</i>	<i>73-134</i>				
<i>Toluene-d8</i>	<i>119</i>	<i>81-124</i>				
<i>4-Bromofluorobenzene</i>	<i>121</i>	<i>80-131</i>				



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Matrix: Soil  
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>FL363-B5-17-18</b>					
Laboratory ID:	10-062-11					
Dichlorodifluoromethane	ND	0.0018	EPA 8260C	10-9-17	10-9-17	
Chloromethane	ND	0.0051	EPA 8260C	10-9-17	10-9-17	
Vinyl Chloride	ND	0.0010	EPA 8260C	10-9-17	10-9-17	
Bromomethane	ND	0.0010	EPA 8260C	10-9-17	10-9-17	
Chloroethane	ND	0.0051	EPA 8260C	10-9-17	10-9-17	
Trichlorofluoromethane	ND	0.0010	EPA 8260C	10-9-17	10-9-17	
1,1-Dichloroethene	ND	0.0010	EPA 8260C	10-9-17	10-9-17	
Acetone	0.065	0.0051	EPA 8260C	10-9-17	10-9-17	
Iodomethane	ND	0.0051	EPA 8260C	10-9-17	10-9-17	
Carbon Disulfide	ND	0.0010	EPA 8260C	10-9-17	10-9-17	
Methylene Chloride	ND	0.010	EPA 8260C	10-9-17	10-9-17	
(trans) 1,2-Dichloroethene	ND	0.0010	EPA 8260C	10-9-17	10-9-17	
Methyl t-Butyl Ether	ND	0.0010	EPA 8260C	10-9-17	10-9-17	
1,1-Dichloroethane	ND	0.0010	EPA 8260C	10-9-17	10-9-17	
Vinyl Acetate	ND	0.0051	EPA 8260C	10-9-17	10-9-17	
2,2-Dichloropropane	ND	0.0010	EPA 8260C	10-9-17	10-9-17	
(cis) 1,2-Dichloroethene	ND	0.0010	EPA 8260C	10-9-17	10-9-17	
2-Butanone	0.0070	0.0051	EPA 8260C	10-9-17	10-9-17	
Bromochloromethane	ND	0.0010	EPA 8260C	10-9-17	10-9-17	
Chloroform	ND	0.0010	EPA 8260C	10-9-17	10-9-17	
1,1,1-Trichloroethane	ND	0.0010	EPA 8260C	10-9-17	10-9-17	
Carbon Tetrachloride	ND	0.0010	EPA 8260C	10-9-17	10-9-17	
1,1-Dichloropropene	ND	0.0010	EPA 8260C	10-9-17	10-9-17	
Benzene	0.012	0.0010	EPA 8260C	10-9-17	10-9-17	
1,2-Dichloroethane	ND	0.0010	EPA 8260C	10-9-17	10-9-17	
Trichloroethene	ND	0.0010	EPA 8260C	10-9-17	10-9-17	
1,2-Dichloropropane	ND	0.0010	EPA 8260C	10-9-17	10-9-17	
Dibromomethane	ND	0.0010	EPA 8260C	10-9-17	10-9-17	
Bromodichloromethane	ND	0.0010	EPA 8260C	10-9-17	10-9-17	
2-Chloroethyl Vinyl Ether	ND	0.0051	EPA 8260C	10-9-17	10-9-17	
(cis) 1,3-Dichloropropene	ND	0.0010	EPA 8260C	10-9-17	10-9-17	
Methyl Isobutyl Ketone	ND	0.0051	EPA 8260C	10-9-17	10-9-17	
Toluene	0.018	0.0051	EPA 8260C	10-9-17	10-9-17	
(trans) 1,3-Dichloropropene	ND	0.0010	EPA 8260C	10-9-17	10-9-17	



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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>FL363-B5-17-18</b>					
Laboratory ID:	10-062-11					
1,1,2-Trichloroethane	ND	0.0010	EPA 8260C	10-9-17	10-9-17	
Tetrachloroethene	ND	0.0010	EPA 8260C	10-9-17	10-9-17	
1,3-Dichloropropane	ND	0.0010	EPA 8260C	10-9-17	10-9-17	
2-Hexanone	ND	0.0051	EPA 8260C	10-9-17	10-9-17	
Dibromochloromethane	ND	0.0010	EPA 8260C	10-9-17	10-9-17	
1,2-Dibromoethane	ND	0.0010	EPA 8260C	10-9-17	10-9-17	
Chlorobenzene	ND	0.0010	EPA 8260C	10-9-17	10-9-17	
1,1,1,2-Tetrachloroethane	ND	0.0010	EPA 8260C	10-9-17	10-9-17	
Ethylbenzene	0.011	0.0010	EPA 8260C	10-9-17	10-9-17	
m,p-Xylene	0.013	0.0020	EPA 8260C	10-9-17	10-9-17	
o-Xylene	0.0040	0.0010	EPA 8260C	10-9-17	10-9-17	
Styrene	ND	0.0010	EPA 8260C	10-9-17	10-9-17	
Bromoform	ND	0.0051	EPA 8260C	10-9-17	10-9-17	
Isopropylbenzene	0.0014	0.0010	EPA 8260C	10-9-17	10-9-17	
Bromobenzene	ND	0.0010	EPA 8260C	10-9-17	10-9-17	
1,1,2,2-Tetrachloroethane	ND	0.0010	EPA 8260C	10-9-17	10-9-17	
1,2,3-Trichloropropane	ND	0.0010	EPA 8260C	10-9-17	10-9-17	
n-Propylbenzene	0.0039	0.0010	EPA 8260C	10-9-17	10-9-17	
2-Chlorotoluene	ND	0.0010	EPA 8260C	10-9-17	10-9-17	
4-Chlorotoluene	ND	0.0010	EPA 8260C	10-9-17	10-9-17	
1,3,5-Trimethylbenzene	0.0014	0.0010	EPA 8260C	10-9-17	10-9-17	
tert-Butylbenzene	ND	0.0010	EPA 8260C	10-9-17	10-9-17	
1,2,4-Trimethylbenzene	0.0084	0.0010	EPA 8260C	10-9-17	10-9-17	
sec-Butylbenzene	ND	0.0010	EPA 8260C	10-9-17	10-9-17	
1,3-Dichlorobenzene	ND	0.0010	EPA 8260C	10-9-17	10-9-17	
p-Isopropyltoluene	ND	0.0010	EPA 8260C	10-9-17	10-9-17	
1,4-Dichlorobenzene	ND	0.0010	EPA 8260C	10-9-17	10-9-17	
1,2-Dichlorobenzene	ND	0.0010	EPA 8260C	10-9-17	10-9-17	
n-Butylbenzene	0.0017	0.0010	EPA 8260C	10-9-17	10-9-17	
1,2-Dibromo-3-chloropropane	ND	0.0051	EPA 8260C	10-9-17	10-9-17	
1,2,4-Trichlorobenzene	ND	0.0010	EPA 8260C	10-9-17	10-9-17	
Hexachlorobutadiene	ND	0.0051	EPA 8260C	10-9-17	10-9-17	
Naphthalene	ND	0.0010	EPA 8260C	10-9-17	10-9-17	
1,2,3-Trichlorobenzene	ND	0.0010	EPA 8260C	10-9-17	10-9-17	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>114</i>	<i>73-134</i>				
<i>Toluene-d8</i>	<i>117</i>	<i>81-124</i>				
<i>4-Bromofluorobenzene</i>	<i>125</i>	<i>80-131</i>				



Date of Report: October 12, 2017  
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 Laboratory Reference: 1710-062  
 Project: 4082-039-01

**VOLATILES EPA 8260C**  
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Matrix: Soil  
 Units: mg/kg

<b>Analyte</b>	<b>Result</b>	<b>PQL</b>	<b>Method</b>	<b>Date Prepared</b>	<b>Date Analyzed</b>	<b>Flags</b>
<b>Client ID:</b>	<b>FL363-B6-6-7</b>					
<b>Laboratory ID:</b>	<b>10-062-14</b>					
Dichlorodifluoromethane	ND	0.0021	EPA 8260C	10-9-17	10-9-17	
Chloromethane	ND	0.0059	EPA 8260C	10-9-17	10-9-17	
Vinyl Chloride	ND	0.0012	EPA 8260C	10-9-17	10-9-17	
Bromomethane	ND	0.0012	EPA 8260C	10-9-17	10-9-17	
Chloroethane	ND	0.0059	EPA 8260C	10-9-17	10-9-17	
Trichlorofluoromethane	ND	0.0012	EPA 8260C	10-9-17	10-9-17	
1,1-Dichloroethene	ND	0.0012	EPA 8260C	10-9-17	10-9-17	
Acetone	0.23	0.0059	EPA 8260C	10-9-17	10-9-17	
Iodomethane	ND	0.0059	EPA 8260C	10-9-17	10-9-17	
Carbon Disulfide	0.0026	0.0012	EPA 8260C	10-9-17	10-9-17	
Methylene Chloride	ND	0.012	EPA 8260C	10-9-17	10-9-17	
(trans) 1,2-Dichloroethene	ND	0.0012	EPA 8260C	10-9-17	10-9-17	
Methyl t-Butyl Ether	ND	0.0012	EPA 8260C	10-9-17	10-9-17	
1,1-Dichloroethane	ND	0.0012	EPA 8260C	10-9-17	10-9-17	
Vinyl Acetate	ND	0.0059	EPA 8260C	10-9-17	10-9-17	
2,2-Dichloropropane	ND	0.0012	EPA 8260C	10-9-17	10-9-17	
(cis) 1,2-Dichloroethene	ND	0.0012	EPA 8260C	10-9-17	10-9-17	
2-Butanone	0.023	0.0059	EPA 8260C	10-9-17	10-9-17	
Bromochloromethane	ND	0.0012	EPA 8260C	10-9-17	10-9-17	
Chloroform	ND	0.0012	EPA 8260C	10-9-17	10-9-17	
1,1,1-Trichloroethane	ND	0.0012	EPA 8260C	10-9-17	10-9-17	
Carbon Tetrachloride	ND	0.0012	EPA 8260C	10-9-17	10-9-17	
1,1-Dichloropropene	ND	0.0012	EPA 8260C	10-9-17	10-9-17	
Benzene	0.020	0.0012	EPA 8260C	10-9-17	10-9-17	
1,2-Dichloroethane	ND	0.0012	EPA 8260C	10-9-17	10-9-17	
Trichloroethene	ND	0.0012	EPA 8260C	10-9-17	10-9-17	
1,2-Dichloropropane	ND	0.0012	EPA 8260C	10-9-17	10-9-17	
Dibromomethane	ND	0.0012	EPA 8260C	10-9-17	10-9-17	
Bromodichloromethane	ND	0.0012	EPA 8260C	10-9-17	10-9-17	
2-Chloroethyl Vinyl Ether	ND	0.0059	EPA 8260C	10-9-17	10-9-17	
(cis) 1,3-Dichloropropene	ND	0.0012	EPA 8260C	10-9-17	10-9-17	
Methyl Isobutyl Ketone	ND	0.0059	EPA 8260C	10-9-17	10-9-17	
Toluene	ND	0.0059	EPA 8260C	10-9-17	10-9-17	
(trans) 1,3-Dichloropropene	ND	0.0012	EPA 8260C	10-9-17	10-9-17	



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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>FL363-B6-6-7</b>					
Laboratory ID:	10-062-14					
1,1,2-Trichloroethane	ND	0.0012	EPA 8260C	10-9-17	10-9-17	
Tetrachloroethene	ND	0.0012	EPA 8260C	10-9-17	10-9-17	
1,3-Dichloropropane	ND	0.0012	EPA 8260C	10-9-17	10-9-17	
2-Hexanone	ND	0.0059	EPA 8260C	10-9-17	10-9-17	
Dibromochloromethane	ND	0.0012	EPA 8260C	10-9-17	10-9-17	
1,2-Dibromoethane	ND	0.0012	EPA 8260C	10-9-17	10-9-17	
Chlorobenzene	ND	0.0012	EPA 8260C	10-9-17	10-9-17	
1,1,1,2-Tetrachloroethane	ND	0.0012	EPA 8260C	10-9-17	10-9-17	
Ethylbenzene	0.0014	0.0012	EPA 8260C	10-9-17	10-9-17	
m,p-Xylene	ND	0.0024	EPA 8260C	10-9-17	10-9-17	
o-Xylene	ND	0.0012	EPA 8260C	10-9-17	10-9-17	
Styrene	ND	0.0012	EPA 8260C	10-9-17	10-9-17	
Bromoform	ND	0.0059	EPA 8260C	10-9-17	10-9-17	
Isopropylbenzene	ND	0.0012	EPA 8260C	10-9-17	10-9-17	
Bromobenzene	ND	0.061	EPA 8260C	10-10-17	10-10-17	
1,1,2,2-Tetrachloroethane	ND	0.061	EPA 8260C	10-10-17	10-10-17	
1,2,3-Trichloropropane	ND	0.061	EPA 8260C	10-10-17	10-10-17	
n-Propylbenzene	ND	0.061	EPA 8260C	10-10-17	10-10-17	
2-Chlorotoluene	ND	0.061	EPA 8260C	10-10-17	10-10-17	
4-Chlorotoluene	ND	0.061	EPA 8260C	10-10-17	10-10-17	
1,3,5-Trimethylbenzene	ND	0.061	EPA 8260C	10-10-17	10-10-17	
tert-Butylbenzene	ND	0.061	EPA 8260C	10-10-17	10-10-17	
1,2,4-Trimethylbenzene	ND	0.061	EPA 8260C	10-10-17	10-10-17	
sec-Butylbenzene	ND	0.061	EPA 8260C	10-10-17	10-10-17	
1,3-Dichlorobenzene	ND	0.061	EPA 8260C	10-10-17	10-10-17	
p-Isopropyltoluene	ND	0.061	EPA 8260C	10-10-17	10-10-17	
1,4-Dichlorobenzene	ND	0.061	EPA 8260C	10-10-17	10-10-17	
1,2-Dichlorobenzene	ND	0.061	EPA 8260C	10-10-17	10-10-17	
n-Butylbenzene	ND	0.061	EPA 8260C	10-10-17	10-10-17	
1,2-Dibromo-3-chloropropane	ND	0.31	EPA 8260C	10-10-17	10-10-17	
1,2,4-Trichlorobenzene	ND	0.061	EPA 8260C	10-10-17	10-10-17	
Hexachlorobutadiene	ND	0.31	EPA 8260C	10-10-17	10-10-17	
Naphthalene	ND	0.061	EPA 8260C	10-10-17	10-10-17	
1,2,3-Trichlorobenzene	ND	0.061	EPA 8260C	10-10-17	10-10-17	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>118</i>	<i>73-134</i>				
<i>Toluene-d8</i>	<i>116</i>	<i>81-124</i>				
<i>4-Bromofluorobenzene</i>	<i>103</i>	<i>80-131</i>				



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Matrix: Soil  
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>FL363-B6-11-12</b>					
Laboratory ID:	10-062-15					
Dichlorodifluoromethane	ND	0.0044	EPA 8260C	10-9-17	10-9-17	
Chloromethane	ND	0.012	EPA 8260C	10-9-17	10-9-17	
Vinyl Chloride	ND	0.0025	EPA 8260C	10-9-17	10-9-17	
Bromomethane	ND	0.0025	EPA 8260C	10-9-17	10-9-17	
Chloroethane	ND	0.012	EPA 8260C	10-9-17	10-9-17	
Trichlorofluoromethane	ND	0.0025	EPA 8260C	10-9-17	10-9-17	
1,1-Dichloroethene	ND	0.0025	EPA 8260C	10-9-17	10-9-17	
Acetone	0.56	0.012	EPA 8260C	10-9-17	10-9-17	
Iodomethane	ND	0.012	EPA 8260C	10-9-17	10-9-17	
Carbon Disulfide	ND	0.0025	EPA 8260C	10-9-17	10-9-17	
Methylene Chloride	ND	0.025	EPA 8260C	10-9-17	10-9-17	
(trans) 1,2-Dichloroethene	ND	0.0025	EPA 8260C	10-9-17	10-9-17	
Methyl t-Butyl Ether	ND	0.0025	EPA 8260C	10-9-17	10-9-17	
1,1-Dichloroethane	ND	0.0025	EPA 8260C	10-9-17	10-9-17	
Vinyl Acetate	ND	0.012	EPA 8260C	10-9-17	10-9-17	
2,2-Dichloropropane	ND	0.0025	EPA 8260C	10-9-17	10-9-17	
(cis) 1,2-Dichloroethene	ND	0.0025	EPA 8260C	10-9-17	10-9-17	
2-Butanone	0.13	0.012	EPA 8260C	10-9-17	10-9-17	
Bromochloromethane	ND	0.0025	EPA 8260C	10-9-17	10-9-17	
Chloroform	ND	0.0025	EPA 8260C	10-9-17	10-9-17	
1,1,1-Trichloroethane	ND	0.0025	EPA 8260C	10-9-17	10-9-17	
Carbon Tetrachloride	ND	0.0025	EPA 8260C	10-9-17	10-9-17	
1,1-Dichloropropene	ND	0.0025	EPA 8260C	10-9-17	10-9-17	
Benzene	0.0025	0.0025	EPA 8260C	10-9-17	10-9-17	
1,2-Dichloroethane	ND	0.0025	EPA 8260C	10-9-17	10-9-17	
Trichloroethene	ND	0.0025	EPA 8260C	10-9-17	10-9-17	
1,2-Dichloropropane	ND	0.0025	EPA 8260C	10-9-17	10-9-17	
Dibromomethane	ND	0.0025	EPA 8260C	10-9-17	10-9-17	
Bromodichloromethane	ND	0.0025	EPA 8260C	10-9-17	10-9-17	
2-Chloroethyl Vinyl Ether	ND	0.012	EPA 8260C	10-9-17	10-9-17	
(cis) 1,3-Dichloropropene	ND	0.0025	EPA 8260C	10-9-17	10-9-17	
Methyl Isobutyl Ketone	ND	0.012	EPA 8260C	10-9-17	10-9-17	
Toluene	ND	0.012	EPA 8260C	10-9-17	10-9-17	
(trans) 1,3-Dichloropropene	ND	0.0025	EPA 8260C	10-9-17	10-9-17	



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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>FL363-B6-11-12</b>					
Laboratory ID:	10-062-15					
1,1,2-Trichloroethane	ND	0.0025	EPA 8260C	10-9-17	10-9-17	
Tetrachloroethene	ND	0.0025	EPA 8260C	10-9-17	10-9-17	
1,3-Dichloropropane	ND	0.0025	EPA 8260C	10-9-17	10-9-17	
2-Hexanone	ND	0.012	EPA 8260C	10-9-17	10-9-17	
Dibromochloromethane	ND	0.0025	EPA 8260C	10-9-17	10-9-17	
1,2-Dibromoethane	ND	0.0025	EPA 8260C	10-9-17	10-9-17	
Chlorobenzene	ND	0.0025	EPA 8260C	10-9-17	10-9-17	
1,1,1,2-Tetrachloroethane	ND	0.0025	EPA 8260C	10-9-17	10-9-17	
Ethylbenzene	ND	0.0025	EPA 8260C	10-9-17	10-9-17	
m,p-Xylene	ND	0.0049	EPA 8260C	10-9-17	10-9-17	
o-Xylene	ND	0.0025	EPA 8260C	10-9-17	10-9-17	
Styrene	ND	0.0025	EPA 8260C	10-9-17	10-9-17	
Bromoform	ND	0.012	EPA 8260C	10-9-17	10-9-17	
Isopropylbenzene	ND	0.0025	EPA 8260C	10-9-17	10-9-17	
Bromobenzene	ND	0.097	EPA 8260C	10-10-17	10-10-17	
1,1,2,2-Tetrachloroethane	ND	0.097	EPA 8260C	10-10-17	10-10-17	
1,2,3-Trichloropropane	ND	0.097	EPA 8260C	10-10-17	10-10-17	
n-Propylbenzene	ND	0.097	EPA 8260C	10-10-17	10-10-17	
2-Chlorotoluene	ND	0.097	EPA 8260C	10-10-17	10-10-17	
4-Chlorotoluene	ND	0.097	EPA 8260C	10-10-17	10-10-17	
1,3,5-Trimethylbenzene	ND	0.097	EPA 8260C	10-10-17	10-10-17	
tert-Butylbenzene	ND	0.097	EPA 8260C	10-10-17	10-10-17	
1,2,4-Trimethylbenzene	ND	0.097	EPA 8260C	10-10-17	10-10-17	
sec-Butylbenzene	ND	0.097	EPA 8260C	10-10-17	10-10-17	
1,3-Dichlorobenzene	ND	0.097	EPA 8260C	10-10-17	10-10-17	
p-Isopropyltoluene	ND	0.097	EPA 8260C	10-10-17	10-10-17	
1,4-Dichlorobenzene	ND	0.097	EPA 8260C	10-10-17	10-10-17	
1,2-Dichlorobenzene	ND	0.097	EPA 8260C	10-10-17	10-10-17	
n-Butylbenzene	ND	0.097	EPA 8260C	10-10-17	10-10-17	
1,2-Dibromo-3-chloropropane	ND	0.49	EPA 8260C	10-10-17	10-10-17	
1,2,4-Trichlorobenzene	ND	0.097	EPA 8260C	10-10-17	10-10-17	
Hexachlorobutadiene	ND	0.49	EPA 8260C	10-10-17	10-10-17	
Naphthalene	ND	0.097	EPA 8260C	10-10-17	10-10-17	
1,2,3-Trichlorobenzene	ND	0.097	EPA 8260C	10-10-17	10-10-17	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>117</i>	<i>73-134</i>				
<i>Toluene-d8</i>	<i>115</i>	<i>81-124</i>				
<i>4-Bromofluorobenzene</i>	<i>103</i>	<i>80-131</i>				



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Matrix: Soil  
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>FL363-B6-17-18</b>					
Laboratory ID:	10-062-16					
Dichlorodifluoromethane	ND	0.0020	EPA 8260C	10-9-17	10-9-17	
Chloromethane	ND	0.0056	EPA 8260C	10-9-17	10-9-17	
Vinyl Chloride	ND	0.0011	EPA 8260C	10-9-17	10-9-17	
Bromomethane	ND	0.0011	EPA 8260C	10-9-17	10-9-17	
Chloroethane	ND	0.0056	EPA 8260C	10-9-17	10-9-17	
Trichlorofluoromethane	ND	0.0011	EPA 8260C	10-9-17	10-9-17	
1,1-Dichloroethene	ND	0.0011	EPA 8260C	10-9-17	10-9-17	
Acetone	ND	0.0056	EPA 8260C	10-9-17	10-9-17	
Iodomethane	ND	0.0056	EPA 8260C	10-9-17	10-9-17	
Carbon Disulfide	ND	0.0011	EPA 8260C	10-9-17	10-9-17	
Methylene Chloride	ND	0.011	EPA 8260C	10-9-17	10-9-17	
(trans) 1,2-Dichloroethene	ND	0.0011	EPA 8260C	10-9-17	10-9-17	
Methyl t-Butyl Ether	ND	0.0011	EPA 8260C	10-9-17	10-9-17	
1,1-Dichloroethane	ND	0.0011	EPA 8260C	10-9-17	10-9-17	
Vinyl Acetate	ND	0.0056	EPA 8260C	10-9-17	10-9-17	
2,2-Dichloropropane	ND	0.0011	EPA 8260C	10-9-17	10-9-17	
(cis) 1,2-Dichloroethene	ND	0.0011	EPA 8260C	10-9-17	10-9-17	
2-Butanone	ND	0.0056	EPA 8260C	10-9-17	10-9-17	
Bromochloromethane	ND	0.0011	EPA 8260C	10-9-17	10-9-17	
Chloroform	ND	0.0011	EPA 8260C	10-9-17	10-9-17	
1,1,1-Trichloroethane	ND	0.0011	EPA 8260C	10-9-17	10-9-17	
Carbon Tetrachloride	ND	0.0011	EPA 8260C	10-9-17	10-9-17	
1,1-Dichloropropene	ND	0.0011	EPA 8260C	10-9-17	10-9-17	
Benzene	ND	0.0011	EPA 8260C	10-9-17	10-9-17	
1,2-Dichloroethane	ND	0.0011	EPA 8260C	10-9-17	10-9-17	
Trichloroethene	ND	0.0011	EPA 8260C	10-9-17	10-9-17	
1,2-Dichloropropane	ND	0.0011	EPA 8260C	10-9-17	10-9-17	
Dibromomethane	ND	0.0011	EPA 8260C	10-9-17	10-9-17	
Bromodichloromethane	ND	0.0011	EPA 8260C	10-9-17	10-9-17	
2-Chloroethyl Vinyl Ether	ND	0.0056	EPA 8260C	10-9-17	10-9-17	
(cis) 1,3-Dichloropropene	ND	0.0011	EPA 8260C	10-9-17	10-9-17	
Methyl Isobutyl Ketone	ND	0.0056	EPA 8260C	10-9-17	10-9-17	
Toluene	ND	0.0056	EPA 8260C	10-9-17	10-9-17	
(trans) 1,3-Dichloropropene	ND	0.0011	EPA 8260C	10-9-17	10-9-17	



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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>FL363-B6-17-18</b>					
Laboratory ID:	10-062-16					
1,1,2-Trichloroethane	ND	0.0011	EPA 8260C	10-9-17	10-9-17	
Tetrachloroethene	ND	0.0011	EPA 8260C	10-9-17	10-9-17	
1,3-Dichloropropane	ND	0.0011	EPA 8260C	10-9-17	10-9-17	
2-Hexanone	ND	0.0056	EPA 8260C	10-9-17	10-9-17	
Dibromochloromethane	ND	0.0011	EPA 8260C	10-9-17	10-9-17	
1,2-Dibromoethane	ND	0.0011	EPA 8260C	10-9-17	10-9-17	
Chlorobenzene	ND	0.0011	EPA 8260C	10-9-17	10-9-17	
1,1,1,2-Tetrachloroethane	ND	0.0011	EPA 8260C	10-9-17	10-9-17	
Ethylbenzene	ND	0.0011	EPA 8260C	10-9-17	10-9-17	
m,p-Xylene	ND	0.0023	EPA 8260C	10-9-17	10-9-17	
o-Xylene	ND	0.0011	EPA 8260C	10-9-17	10-9-17	
Styrene	ND	0.0011	EPA 8260C	10-9-17	10-9-17	
Bromoform	ND	0.0056	EPA 8260C	10-9-17	10-9-17	
Isopropylbenzene	ND	0.0011	EPA 8260C	10-9-17	10-9-17	
Bromobenzene	ND	0.0011	EPA 8260C	10-9-17	10-9-17	
1,1,2,2-Tetrachloroethane	ND	0.0011	EPA 8260C	10-9-17	10-9-17	
1,2,3-Trichloropropane	ND	0.0011	EPA 8260C	10-9-17	10-9-17	
n-Propylbenzene	ND	0.0011	EPA 8260C	10-9-17	10-9-17	
2-Chlorotoluene	ND	0.0011	EPA 8260C	10-9-17	10-9-17	
4-Chlorotoluene	ND	0.0011	EPA 8260C	10-9-17	10-9-17	
1,3,5-Trimethylbenzene	ND	0.0011	EPA 8260C	10-9-17	10-9-17	
tert-Butylbenzene	ND	0.0011	EPA 8260C	10-9-17	10-9-17	
1,2,4-Trimethylbenzene	ND	0.0011	EPA 8260C	10-9-17	10-9-17	
sec-Butylbenzene	ND	0.0011	EPA 8260C	10-9-17	10-9-17	
1,3-Dichlorobenzene	ND	0.0011	EPA 8260C	10-9-17	10-9-17	
p-Isopropyltoluene	ND	0.0011	EPA 8260C	10-9-17	10-9-17	
1,4-Dichlorobenzene	ND	0.0011	EPA 8260C	10-9-17	10-9-17	
1,2-Dichlorobenzene	ND	0.0011	EPA 8260C	10-9-17	10-9-17	
n-Butylbenzene	ND	0.0011	EPA 8260C	10-9-17	10-9-17	
1,2-Dibromo-3-chloropropane	ND	0.0056	EPA 8260C	10-9-17	10-9-17	
1,2,4-Trichlorobenzene	ND	0.0011	EPA 8260C	10-9-17	10-9-17	
Hexachlorobutadiene	ND	0.0056	EPA 8260C	10-9-17	10-9-17	
Naphthalene	ND	0.0011	EPA 8260C	10-9-17	10-9-17	
1,2,3-Trichlorobenzene	ND	0.0011	EPA 8260C	10-9-17	10-9-17	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>119</i>	<i>73-134</i>				
<i>Toluene-d8</i>	<i>121</i>	<i>81-124</i>				
<i>4-Bromofluorobenzene</i>	<i>123</i>	<i>80-131</i>				



Date of Report: October 12, 2017  
 Samples Submitted: October 5, 2017  
 Laboratory Reference: 1710-062  
 Project: 4082-039-01

**VOLATILES EPA 8260C**  
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Matrix: Soil  
 Units: mg/kg

<b>Analyte</b>	<b>Result</b>	<b>PQL</b>	<b>Method</b>	<b>Date Prepared</b>	<b>Date Analyzed</b>	<b>Flags</b>
<b>Client ID:</b>	<b>FL363-B7-6-7</b>					
<b>Laboratory ID:</b>	10-062-19					
Dichlorodifluoromethane	ND	0.0019	EPA 8260C	10-9-17	10-9-17	
Chloromethane	ND	0.0052	EPA 8260C	10-9-17	10-9-17	
Vinyl Chloride	ND	0.0010	EPA 8260C	10-9-17	10-9-17	
Bromomethane	ND	0.0010	EPA 8260C	10-9-17	10-9-17	
Chloroethane	ND	0.0052	EPA 8260C	10-9-17	10-9-17	
Trichlorofluoromethane	ND	0.0010	EPA 8260C	10-9-17	10-9-17	
1,1-Dichloroethene	ND	0.0010	EPA 8260C	10-9-17	10-9-17	
Acetone	0.091	0.0052	EPA 8260C	10-9-17	10-9-17	
Iodomethane	ND	0.0052	EPA 8260C	10-9-17	10-9-17	
Carbon Disulfide	ND	0.0010	EPA 8260C	10-9-17	10-9-17	
Methylene Chloride	ND	0.010	EPA 8260C	10-9-17	10-9-17	
(trans) 1,2-Dichloroethene	ND	0.0010	EPA 8260C	10-9-17	10-9-17	
Methyl t-Butyl Ether	ND	0.0010	EPA 8260C	10-9-17	10-9-17	
1,1-Dichloroethane	ND	0.0010	EPA 8260C	10-9-17	10-9-17	
Vinyl Acetate	ND	0.0052	EPA 8260C	10-9-17	10-9-17	
2,2-Dichloropropane	ND	0.0010	EPA 8260C	10-9-17	10-9-17	
(cis) 1,2-Dichloroethene	ND	0.0010	EPA 8260C	10-9-17	10-9-17	
2-Butanone	0.0072	0.0052	EPA 8260C	10-9-17	10-9-17	
Bromochloromethane	ND	0.0010	EPA 8260C	10-9-17	10-9-17	
Chloroform	ND	0.0010	EPA 8260C	10-9-17	10-9-17	
1,1,1-Trichloroethane	ND	0.0010	EPA 8260C	10-9-17	10-9-17	
Carbon Tetrachloride	ND	0.0010	EPA 8260C	10-9-17	10-9-17	
1,1-Dichloropropene	ND	0.0010	EPA 8260C	10-9-17	10-9-17	
Benzene	ND	0.0010	EPA 8260C	10-9-17	10-9-17	
1,2-Dichloroethane	ND	0.0010	EPA 8260C	10-9-17	10-9-17	
Trichloroethene	ND	0.0010	EPA 8260C	10-9-17	10-9-17	
1,2-Dichloropropane	ND	0.0010	EPA 8260C	10-9-17	10-9-17	
Dibromomethane	ND	0.0010	EPA 8260C	10-9-17	10-9-17	
Bromodichloromethane	ND	0.0010	EPA 8260C	10-9-17	10-9-17	
2-Chloroethyl Vinyl Ether	ND	0.0052	EPA 8260C	10-9-17	10-9-17	
(cis) 1,3-Dichloropropene	ND	0.0010	EPA 8260C	10-9-17	10-9-17	
Methyl Isobutyl Ketone	ND	0.0052	EPA 8260C	10-9-17	10-9-17	
Toluene	ND	0.0052	EPA 8260C	10-9-17	10-9-17	
(trans) 1,3-Dichloropropene	ND	0.0010	EPA 8260C	10-9-17	10-9-17	



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 Project: 4082-039-01

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>FL363-B7-6-7</b>					
<b>Laboratory ID:</b>	10-062-19					
1,1,2-Trichloroethane	ND	0.0010	EPA 8260C	10-9-17	10-9-17	
Tetrachloroethene	ND	0.0010	EPA 8260C	10-9-17	10-9-17	
1,3-Dichloropropane	ND	0.0010	EPA 8260C	10-9-17	10-9-17	
2-Hexanone	ND	0.0052	EPA 8260C	10-9-17	10-9-17	
Dibromochloromethane	ND	0.0010	EPA 8260C	10-9-17	10-9-17	
1,2-Dibromoethane	ND	0.0010	EPA 8260C	10-9-17	10-9-17	
Chlorobenzene	ND	0.0010	EPA 8260C	10-9-17	10-9-17	
1,1,1,2-Tetrachloroethane	ND	0.0010	EPA 8260C	10-9-17	10-9-17	
Ethylbenzene	0.0016	0.0010	EPA 8260C	10-9-17	10-9-17	
m,p-Xylene	0.011	0.0021	EPA 8260C	10-9-17	10-9-17	
o-Xylene	0.0025	0.0010	EPA 8260C	10-9-17	10-9-17	
Styrene	ND	0.0010	EPA 8260C	10-9-17	10-9-17	
Bromoform	ND	0.0052	EPA 8260C	10-9-17	10-9-17	
Isopropylbenzene	ND	0.0010	EPA 8260C	10-9-17	10-9-17	
Bromobenzene	ND	0.0010	EPA 8260C	10-9-17	10-9-17	
1,1,2,2-Tetrachloroethane	ND	0.0010	EPA 8260C	10-9-17	10-9-17	
1,2,3-Trichloropropane	ND	0.0010	EPA 8260C	10-9-17	10-9-17	
n-Propylbenzene	0.0013	0.0010	EPA 8260C	10-9-17	10-9-17	
2-Chlorotoluene	ND	0.0010	EPA 8260C	10-9-17	10-9-17	
4-Chlorotoluene	ND	0.0010	EPA 8260C	10-9-17	10-9-17	
1,3,5-Trimethylbenzene	0.0017	0.0010	EPA 8260C	10-9-17	10-9-17	
tert-Butylbenzene	ND	0.0010	EPA 8260C	10-9-17	10-9-17	
1,2,4-Trimethylbenzene	0.0041	0.0010	EPA 8260C	10-9-17	10-9-17	
sec-Butylbenzene	ND	0.0010	EPA 8260C	10-9-17	10-9-17	
1,3-Dichlorobenzene	ND	0.0010	EPA 8260C	10-9-17	10-9-17	
p-Isopropyltoluene	ND	0.0010	EPA 8260C	10-9-17	10-9-17	
1,4-Dichlorobenzene	ND	0.0010	EPA 8260C	10-9-17	10-9-17	
1,2-Dichlorobenzene	ND	0.0010	EPA 8260C	10-9-17	10-9-17	
n-Butylbenzene	ND	0.0010	EPA 8260C	10-9-17	10-9-17	
1,2-Dibromo-3-chloropropane	ND	0.0052	EPA 8260C	10-9-17	10-9-17	
1,2,4-Trichlorobenzene	ND	0.0010	EPA 8260C	10-9-17	10-9-17	
Hexachlorobutadiene	ND	0.0052	EPA 8260C	10-9-17	10-9-17	
Naphthalene	ND	0.0010	EPA 8260C	10-9-17	10-9-17	
1,2,3-Trichlorobenzene	ND	0.0010	EPA 8260C	10-9-17	10-9-17	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>111</i>	<i>73-134</i>				
<i>Toluene-d8</i>	<i>114</i>	<i>81-124</i>				
<i>4-Bromofluorobenzene</i>	<i>115</i>	<i>80-131</i>				



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Matrix: Soil  
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>FL363-B7-10-11</b>					
Laboratory ID:	10-062-20					
Dichlorodifluoromethane	ND	0.0014	EPA 8260C	10-9-17	10-9-17	
Chloromethane	ND	0.0039	EPA 8260C	10-9-17	10-9-17	
Vinyl Chloride	ND	0.00079	EPA 8260C	10-9-17	10-9-17	
Bromomethane	ND	0.00079	EPA 8260C	10-9-17	10-9-17	
Chloroethane	ND	0.0039	EPA 8260C	10-9-17	10-9-17	
Trichlorofluoromethane	ND	0.00079	EPA 8260C	10-9-17	10-9-17	
1,1-Dichloroethene	ND	0.00079	EPA 8260C	10-9-17	10-9-17	
Acetone	0.047	0.0039	EPA 8260C	10-9-17	10-9-17	
Iodomethane	ND	0.0039	EPA 8260C	10-9-17	10-9-17	
Carbon Disulfide	ND	0.00079	EPA 8260C	10-9-17	10-9-17	
Methylene Chloride	ND	0.0079	EPA 8260C	10-9-17	10-9-17	
(trans) 1,2-Dichloroethene	ND	0.00079	EPA 8260C	10-9-17	10-9-17	
Methyl t-Butyl Ether	ND	0.00079	EPA 8260C	10-9-17	10-9-17	
1,1-Dichloroethane	ND	0.00079	EPA 8260C	10-9-17	10-9-17	
Vinyl Acetate	ND	0.0039	EPA 8260C	10-9-17	10-9-17	
2,2-Dichloropropane	ND	0.00079	EPA 8260C	10-9-17	10-9-17	
(cis) 1,2-Dichloroethene	ND	0.00079	EPA 8260C	10-9-17	10-9-17	
2-Butanone	0.0043	0.0039	EPA 8260C	10-9-17	10-9-17	
Bromochloromethane	ND	0.00079	EPA 8260C	10-9-17	10-9-17	
Chloroform	ND	0.00079	EPA 8260C	10-9-17	10-9-17	
1,1,1-Trichloroethane	ND	0.00079	EPA 8260C	10-9-17	10-9-17	
Carbon Tetrachloride	ND	0.00079	EPA 8260C	10-9-17	10-9-17	
1,1-Dichloropropene	ND	0.00079	EPA 8260C	10-9-17	10-9-17	
Benzene	0.00089	0.00079	EPA 8260C	10-9-17	10-9-17	
1,2-Dichloroethane	ND	0.00079	EPA 8260C	10-9-17	10-9-17	
Trichloroethene	ND	0.00079	EPA 8260C	10-9-17	10-9-17	
1,2-Dichloropropane	ND	0.00079	EPA 8260C	10-9-17	10-9-17	
Dibromomethane	ND	0.00079	EPA 8260C	10-9-17	10-9-17	
Bromodichloromethane	ND	0.00079	EPA 8260C	10-9-17	10-9-17	
2-Chloroethyl Vinyl Ether	ND	0.0039	EPA 8260C	10-9-17	10-9-17	
(cis) 1,3-Dichloropropene	ND	0.00079	EPA 8260C	10-9-17	10-9-17	
Methyl Isobutyl Ketone	ND	0.0039	EPA 8260C	10-9-17	10-9-17	
Toluene	ND	0.0039	EPA 8260C	10-9-17	10-9-17	
(trans) 1,3-Dichloropropene	ND	0.00079	EPA 8260C	10-9-17	10-9-17	



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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>FL363-B7-10-11</b>					
Laboratory ID:	10-062-20					
1,1,2-Trichloroethane	ND	0.00079	EPA 8260C	10-9-17	10-9-17	
Tetrachloroethene	ND	0.00079	EPA 8260C	10-9-17	10-9-17	
1,3-Dichloropropane	ND	0.00079	EPA 8260C	10-9-17	10-9-17	
2-Hexanone	ND	0.0039	EPA 8260C	10-9-17	10-9-17	
Dibromochloromethane	ND	0.00079	EPA 8260C	10-9-17	10-9-17	
1,2-Dibromoethane	ND	0.00079	EPA 8260C	10-9-17	10-9-17	
Chlorobenzene	ND	0.00079	EPA 8260C	10-9-17	10-9-17	
1,1,1,2-Tetrachloroethane	ND	0.00079	EPA 8260C	10-9-17	10-9-17	
Ethylbenzene	0.0013	0.00079	EPA 8260C	10-9-17	10-9-17	
m,p-Xylene	0.0059	0.0016	EPA 8260C	10-9-17	10-9-17	
o-Xylene	0.0018	0.00079	EPA 8260C	10-9-17	10-9-17	
Styrene	ND	0.00079	EPA 8260C	10-9-17	10-9-17	
Bromoform	ND	0.0039	EPA 8260C	10-9-17	10-9-17	
Isopropylbenzene	ND	0.00079	EPA 8260C	10-9-17	10-9-17	
Bromobenzene	ND	0.00079	EPA 8260C	10-9-17	10-9-17	
1,1,2,2-Tetrachloroethane	ND	0.00079	EPA 8260C	10-9-17	10-9-17	
1,2,3-Trichloropropane	ND	0.00079	EPA 8260C	10-9-17	10-9-17	
n-Propylbenzene	ND	0.00079	EPA 8260C	10-9-17	10-9-17	
2-Chlorotoluene	ND	0.00079	EPA 8260C	10-9-17	10-9-17	
4-Chlorotoluene	ND	0.00079	EPA 8260C	10-9-17	10-9-17	
1,3,5-Trimethylbenzene	0.0012	0.00079	EPA 8260C	10-9-17	10-9-17	
tert-Butylbenzene	ND	0.00079	EPA 8260C	10-9-17	10-9-17	
1,2,4-Trimethylbenzene	0.0020	0.00079	EPA 8260C	10-9-17	10-9-17	
sec-Butylbenzene	ND	0.00079	EPA 8260C	10-9-17	10-9-17	
1,3-Dichlorobenzene	ND	0.00079	EPA 8260C	10-9-17	10-9-17	
p-Isopropyltoluene	ND	0.00079	EPA 8260C	10-9-17	10-9-17	
1,4-Dichlorobenzene	ND	0.00079	EPA 8260C	10-9-17	10-9-17	
1,2-Dichlorobenzene	ND	0.00079	EPA 8260C	10-9-17	10-9-17	
n-Butylbenzene	ND	0.00079	EPA 8260C	10-9-17	10-9-17	
1,2-Dibromo-3-chloropropane	ND	0.0039	EPA 8260C	10-9-17	10-9-17	
1,2,4-Trichlorobenzene	ND	0.00079	EPA 8260C	10-9-17	10-9-17	
Hexachlorobutadiene	ND	0.0039	EPA 8260C	10-9-17	10-9-17	
Naphthalene	ND	0.00079	EPA 8260C	10-9-17	10-9-17	
1,2,3-Trichlorobenzene	ND	0.00079	EPA 8260C	10-9-17	10-9-17	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>101</i>	<i>73-134</i>				
<i>Toluene-d8</i>	<i>107</i>	<i>81-124</i>				
<i>4-Bromofluorobenzene</i>	<i>107</i>	<i>80-131</i>				



Date of Report: October 12, 2017  
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Matrix: Soil  
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>FL363-B7-17-18</b>					
Laboratory ID:	10-062-21					
Dichlorodifluoromethane	ND	0.0018	EPA 8260C	10-9-17	10-9-17	
Chloromethane	ND	0.0051	EPA 8260C	10-9-17	10-9-17	
Vinyl Chloride	ND	0.0010	EPA 8260C	10-9-17	10-9-17	
Bromomethane	ND	0.0010	EPA 8260C	10-9-17	10-9-17	
Chloroethane	ND	0.0051	EPA 8260C	10-9-17	10-9-17	
Trichlorofluoromethane	ND	0.0010	EPA 8260C	10-9-17	10-9-17	
1,1-Dichloroethene	ND	0.0010	EPA 8260C	10-9-17	10-9-17	
Acetone	ND	0.0051	EPA 8260C	10-9-17	10-9-17	
Iodomethane	ND	0.0051	EPA 8260C	10-9-17	10-9-17	
Carbon Disulfide	ND	0.0010	EPA 8260C	10-9-17	10-9-17	
Methylene Chloride	ND	0.010	EPA 8260C	10-9-17	10-9-17	
(trans) 1,2-Dichloroethene	ND	0.0010	EPA 8260C	10-9-17	10-9-17	
Methyl t-Butyl Ether	ND	0.0010	EPA 8260C	10-9-17	10-9-17	
1,1-Dichloroethane	ND	0.0010	EPA 8260C	10-9-17	10-9-17	
Vinyl Acetate	ND	0.0051	EPA 8260C	10-9-17	10-9-17	
2,2-Dichloropropane	ND	0.0010	EPA 8260C	10-9-17	10-9-17	
(cis) 1,2-Dichloroethene	ND	0.0010	EPA 8260C	10-9-17	10-9-17	
2-Butanone	ND	0.0051	EPA 8260C	10-9-17	10-9-17	
Bromochloromethane	ND	0.0010	EPA 8260C	10-9-17	10-9-17	
Chloroform	ND	0.0010	EPA 8260C	10-9-17	10-9-17	
1,1,1-Trichloroethane	ND	0.0010	EPA 8260C	10-9-17	10-9-17	
Carbon Tetrachloride	ND	0.0010	EPA 8260C	10-9-17	10-9-17	
1,1-Dichloropropene	ND	0.0010	EPA 8260C	10-9-17	10-9-17	
Benzene	ND	0.0010	EPA 8260C	10-9-17	10-9-17	
1,2-Dichloroethane	ND	0.0010	EPA 8260C	10-9-17	10-9-17	
Trichloroethene	ND	0.0010	EPA 8260C	10-9-17	10-9-17	
1,2-Dichloropropane	ND	0.0010	EPA 8260C	10-9-17	10-9-17	
Dibromomethane	ND	0.0010	EPA 8260C	10-9-17	10-9-17	
Bromodichloromethane	ND	0.0010	EPA 8260C	10-9-17	10-9-17	
2-Chloroethyl Vinyl Ether	ND	0.0051	EPA 8260C	10-9-17	10-9-17	
(cis) 1,3-Dichloropropene	ND	0.0010	EPA 8260C	10-9-17	10-9-17	
Methyl Isobutyl Ketone	ND	0.0051	EPA 8260C	10-9-17	10-9-17	
Toluene	ND	0.0051	EPA 8260C	10-9-17	10-9-17	
(trans) 1,3-Dichloropropene	ND	0.0010	EPA 8260C	10-9-17	10-9-17	



Date of Report: October 12, 2017  
 Samples Submitted: October 5, 2017  
 Laboratory Reference: 1710-062  
 Project: 4082-039-01

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>FL363-B7-17-18</b>					
Laboratory ID:	10-062-21					
1,1,2-Trichloroethane	ND	0.0010	EPA 8260C	10-9-17	10-9-17	
Tetrachloroethene	ND	0.0010	EPA 8260C	10-9-17	10-9-17	
1,3-Dichloropropane	ND	0.0010	EPA 8260C	10-9-17	10-9-17	
2-Hexanone	ND	0.0051	EPA 8260C	10-9-17	10-9-17	
Dibromochloromethane	ND	0.0010	EPA 8260C	10-9-17	10-9-17	
1,2-Dibromoethane	ND	0.0010	EPA 8260C	10-9-17	10-9-17	
Chlorobenzene	ND	0.0010	EPA 8260C	10-9-17	10-9-17	
1,1,1,2-Tetrachloroethane	ND	0.0010	EPA 8260C	10-9-17	10-9-17	
Ethylbenzene	ND	0.0010	EPA 8260C	10-9-17	10-9-17	
m,p-Xylene	ND	0.0020	EPA 8260C	10-9-17	10-9-17	
o-Xylene	ND	0.0010	EPA 8260C	10-9-17	10-9-17	
Styrene	ND	0.0010	EPA 8260C	10-9-17	10-9-17	
Bromoform	ND	0.0051	EPA 8260C	10-9-17	10-9-17	
Isopropylbenzene	ND	0.0010	EPA 8260C	10-9-17	10-9-17	
Bromobenzene	ND	0.0010	EPA 8260C	10-9-17	10-9-17	
1,1,2,2-Tetrachloroethane	ND	0.0010	EPA 8260C	10-9-17	10-9-17	
1,2,3-Trichloropropane	ND	0.0010	EPA 8260C	10-9-17	10-9-17	
n-Propylbenzene	ND	0.0010	EPA 8260C	10-9-17	10-9-17	
2-Chlorotoluene	ND	0.0010	EPA 8260C	10-9-17	10-9-17	
4-Chlorotoluene	ND	0.0010	EPA 8260C	10-9-17	10-9-17	
1,3,5-Trimethylbenzene	ND	0.0010	EPA 8260C	10-9-17	10-9-17	
tert-Butylbenzene	ND	0.0010	EPA 8260C	10-9-17	10-9-17	
1,2,4-Trimethylbenzene	ND	0.0010	EPA 8260C	10-9-17	10-9-17	
sec-Butylbenzene	ND	0.0010	EPA 8260C	10-9-17	10-9-17	
1,3-Dichlorobenzene	ND	0.0010	EPA 8260C	10-9-17	10-9-17	
p-Isopropyltoluene	ND	0.0010	EPA 8260C	10-9-17	10-9-17	
1,4-Dichlorobenzene	ND	0.0010	EPA 8260C	10-9-17	10-9-17	
1,2-Dichlorobenzene	ND	0.0010	EPA 8260C	10-9-17	10-9-17	
n-Butylbenzene	ND	0.0010	EPA 8260C	10-9-17	10-9-17	
1,2-Dibromo-3-chloropropane	ND	0.0051	EPA 8260C	10-9-17	10-9-17	
1,2,4-Trichlorobenzene	ND	0.0010	EPA 8260C	10-9-17	10-9-17	
Hexachlorobutadiene	ND	0.0051	EPA 8260C	10-9-17	10-9-17	
Naphthalene	ND	0.0010	EPA 8260C	10-9-17	10-9-17	
1,2,3-Trichlorobenzene	ND	0.0010	EPA 8260C	10-9-17	10-9-17	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>116</i>	<i>73-134</i>				
<i>Toluene-d8</i>	<i>121</i>	<i>81-124</i>				
<i>4-Bromofluorobenzene</i>	<i>122</i>	<i>80-131</i>				



Date of Report: October 12, 2017  
 Samples Submitted: October 5, 2017  
 Laboratory Reference: 1710-062  
 Project: 4082-039-01

PAHs EPA 8270D/SIM

Matrix: Soil  
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>FL363-B4-7-8</b>					
Laboratory ID:	10-062-03					
Naphthalene	<b>0.065</b>	0.0092	EPA 8270D/SIM	10-6-17	10-6-17	
2-Methylnaphthalene	<b>0.016</b>	0.0092	EPA 8270D/SIM	10-6-17	10-6-17	
1-Methylnaphthalene	<b>0.010</b>	0.0092	EPA 8270D/SIM	10-6-17	10-6-17	
Acenaphthylene	<b>ND</b>	0.0092	EPA 8270D/SIM	10-6-17	10-6-17	
Acenaphthene	<b>ND</b>	0.0092	EPA 8270D/SIM	10-6-17	10-6-17	
Fluorene	<b>ND</b>	0.0092	EPA 8270D/SIM	10-6-17	10-6-17	
Phenanthrene	<b>0.015</b>	0.0092	EPA 8270D/SIM	10-6-17	10-6-17	
Anthracene	<b>ND</b>	0.0092	EPA 8270D/SIM	10-6-17	10-6-17	
Fluoranthene	<b>0.010</b>	0.0092	EPA 8270D/SIM	10-6-17	10-6-17	
Pyrene	<b>ND</b>	0.0092	EPA 8270D/SIM	10-6-17	10-6-17	
Benzo[a]anthracene	<b>ND</b>	0.0092	EPA 8270D/SIM	10-6-17	10-6-17	
Chrysene	<b>ND</b>	0.0092	EPA 8270D/SIM	10-6-17	10-6-17	
Benzo[b]fluoranthene	<b>ND</b>	0.0092	EPA 8270D/SIM	10-6-17	10-6-17	
Benzo(j,k)fluoranthene	<b>ND</b>	0.0092	EPA 8270D/SIM	10-6-17	10-6-17	
Benzo[a]pyrene	<b>ND</b>	0.0092	EPA 8270D/SIM	10-6-17	10-6-17	
Indeno(1,2,3-c,d)pyrene	<b>ND</b>	0.0092	EPA 8270D/SIM	10-6-17	10-6-17	
Dibenz[a,h]anthracene	<b>ND</b>	0.0092	EPA 8270D/SIM	10-6-17	10-6-17	
Benzo[g,h,i]perylene	<b>ND</b>	0.0092	EPA 8270D/SIM	10-6-17	10-6-17	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>2-Fluorobiphenyl</i>	<i>63</i>	<i>32 - 122</i>				
<i>Pyrene-d10</i>	<i>58</i>	<i>33 - 125</i>				
<i>Terphenyl-d14</i>	<i>63</i>	<i>36 - 118</i>				



Date of Report: October 12, 2017  
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 Laboratory Reference: 1710-062  
 Project: 4082-039-01

PAHs EPA 8270D/SIM

Matrix: Soil  
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>FL363-B4-11-12</b>					
Laboratory ID:	10-062-04					
Naphthalene	<b>0.79</b>	0.0078	EPA 8270D/SIM	10-6-17	10-6-17	
2-Methylnaphthalene	<b>1.1</b>	0.039	EPA 8270D/SIM	10-6-17	10-9-17	
1-Methylnaphthalene	<b>0.51</b>	0.0078	EPA 8270D/SIM	10-6-17	10-6-17	
Acenaphthylene	<b>ND</b>	0.0078	EPA 8270D/SIM	10-6-17	10-6-17	
Acenaphthene	<b>ND</b>	0.0078	EPA 8270D/SIM	10-6-17	10-6-17	
Fluorene	<b>0.0084</b>	0.0078	EPA 8270D/SIM	10-6-17	10-6-17	
Phenanthrene	<b>0.011</b>	0.0078	EPA 8270D/SIM	10-6-17	10-6-17	
Anthracene	<b>ND</b>	0.0078	EPA 8270D/SIM	10-6-17	10-6-17	
Fluoranthene	<b>ND</b>	0.0078	EPA 8270D/SIM	10-6-17	10-6-17	
Pyrene	<b>ND</b>	0.0078	EPA 8270D/SIM	10-6-17	10-6-17	
Benzo[a]anthracene	<b>ND</b>	0.0078	EPA 8270D/SIM	10-6-17	10-6-17	
Chrysene	<b>ND</b>	0.0078	EPA 8270D/SIM	10-6-17	10-6-17	
Benzo[b]fluoranthene	<b>ND</b>	0.0078	EPA 8270D/SIM	10-6-17	10-6-17	
Benzo(j,k)fluoranthene	<b>ND</b>	0.0078	EPA 8270D/SIM	10-6-17	10-6-17	
Benzo[a]pyrene	<b>ND</b>	0.0078	EPA 8270D/SIM	10-6-17	10-6-17	
Indeno(1,2,3-c,d)pyrene	<b>ND</b>	0.0078	EPA 8270D/SIM	10-6-17	10-6-17	
Dibenz[a,h]anthracene	<b>ND</b>	0.0078	EPA 8270D/SIM	10-6-17	10-6-17	
Benzo[g,h,i]perylene	<b>ND</b>	0.0078	EPA 8270D/SIM	10-6-17	10-6-17	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>2-Fluorobiphenyl</i>	<i>62</i>	<i>32 - 122</i>				
<i>Pyrene-d10</i>	<i>63</i>	<i>33 - 125</i>				
<i>Terphenyl-d14</i>	<i>69</i>	<i>36 - 118</i>				



Date of Report: October 12, 2017  
 Samples Submitted: October 5, 2017  
 Laboratory Reference: 1710-062  
 Project: 4082-039-01

PAHs EPA 8270D/SIM

Matrix: Soil  
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>FL363-B4-12-13</b>					
<b>Laboratory ID:</b>	<b>10-062-05</b>					
Naphthalene	<b>1.1</b>	0.037	EPA 8270D/SIM	10-6-17	10-9-17	
2-Methylnaphthalene	<b>0.81</b>	0.037	EPA 8270D/SIM	10-6-17	10-9-17	
1-Methylnaphthalene	<b>0.45</b>	0.0075	EPA 8270D/SIM	10-6-17	10-6-17	
Acenaphthylene	<b>ND</b>	0.0075	EPA 8270D/SIM	10-6-17	10-6-17	
Acenaphthene	<b>ND</b>	0.0075	EPA 8270D/SIM	10-6-17	10-6-17	
Fluorene	<b>ND</b>	0.0075	EPA 8270D/SIM	10-6-17	10-6-17	
Phenanthrene	<b>ND</b>	0.0075	EPA 8270D/SIM	10-6-17	10-6-17	
Anthracene	<b>ND</b>	0.0075	EPA 8270D/SIM	10-6-17	10-6-17	
Fluoranthene	<b>ND</b>	0.0075	EPA 8270D/SIM	10-6-17	10-6-17	
Pyrene	<b>ND</b>	0.0075	EPA 8270D/SIM	10-6-17	10-6-17	
Benzo[a]anthracene	<b>ND</b>	0.0075	EPA 8270D/SIM	10-6-17	10-6-17	
Chrysene	<b>ND</b>	0.0075	EPA 8270D/SIM	10-6-17	10-6-17	
Benzo[b]fluoranthene	<b>ND</b>	0.0075	EPA 8270D/SIM	10-6-17	10-6-17	
Benzo(j,k)fluoranthene	<b>ND</b>	0.0075	EPA 8270D/SIM	10-6-17	10-6-17	
Benzo[a]pyrene	<b>ND</b>	0.0075	EPA 8270D/SIM	10-6-17	10-6-17	
Indeno(1,2,3-c,d)pyrene	<b>ND</b>	0.0075	EPA 8270D/SIM	10-6-17	10-6-17	
Dibenz[a,h]anthracene	<b>ND</b>	0.0075	EPA 8270D/SIM	10-6-17	10-6-17	
Benzo[g,h,i]perylene	<b>ND</b>	0.0075	EPA 8270D/SIM	10-6-17	10-6-17	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>2-Fluorobiphenyl</i>	<i>70</i>	<i>32 - 122</i>				
<i>Pyrene-d10</i>	<i>70</i>	<i>33 - 125</i>				
<i>Terphenyl-d14</i>	<i>79</i>	<i>36 - 118</i>				



Date of Report: October 12, 2017  
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 Laboratory Reference: 1710-062  
 Project: 4082-039-01

PAHs EPA 8270D/SIM

Matrix: Soil  
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>FL363-B4-17-18</b>					
Laboratory ID:	10-062-06					
Naphthalene	<b>0.033</b>	0.0082	EPA 8270D/SIM	10-6-17	10-6-17	
2-Methylnaphthalene	<b>0.022</b>	0.0082	EPA 8270D/SIM	10-6-17	10-6-17	
1-Methylnaphthalene	<b>0.012</b>	0.0082	EPA 8270D/SIM	10-6-17	10-6-17	
Acenaphthylene	<b>ND</b>	0.0082	EPA 8270D/SIM	10-6-17	10-6-17	
Acenaphthene	<b>ND</b>	0.0082	EPA 8270D/SIM	10-6-17	10-6-17	
Fluorene	<b>ND</b>	0.0082	EPA 8270D/SIM	10-6-17	10-6-17	
Phenanthrene	<b>ND</b>	0.0082	EPA 8270D/SIM	10-6-17	10-6-17	
Anthracene	<b>ND</b>	0.0082	EPA 8270D/SIM	10-6-17	10-6-17	
Fluoranthene	<b>ND</b>	0.0082	EPA 8270D/SIM	10-6-17	10-6-17	
Pyrene	<b>ND</b>	0.0082	EPA 8270D/SIM	10-6-17	10-6-17	
Benzo[a]anthracene	<b>ND</b>	0.0082	EPA 8270D/SIM	10-6-17	10-6-17	
Chrysene	<b>ND</b>	0.0082	EPA 8270D/SIM	10-6-17	10-6-17	
Benzo[b]fluoranthene	<b>ND</b>	0.0082	EPA 8270D/SIM	10-6-17	10-6-17	
Benzo(j,k)fluoranthene	<b>ND</b>	0.0082	EPA 8270D/SIM	10-6-17	10-6-17	
Benzo[a]pyrene	<b>ND</b>	0.0082	EPA 8270D/SIM	10-6-17	10-6-17	
Indeno(1,2,3-c,d)pyrene	<b>ND</b>	0.0082	EPA 8270D/SIM	10-6-17	10-6-17	
Dibenz[a,h]anthracene	<b>ND</b>	0.0082	EPA 8270D/SIM	10-6-17	10-6-17	
Benzo[g,h,i]perylene	<b>ND</b>	0.0082	EPA 8270D/SIM	10-6-17	10-6-17	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>2-Fluorobiphenyl</i>	<i>65</i>	<i>32 - 122</i>				
<i>Pyrene-d10</i>	<i>64</i>	<i>33 - 125</i>				
<i>Terphenyl-d14</i>	<i>66</i>	<i>36 - 118</i>				



Date of Report: October 12, 2017  
 Samples Submitted: October 5, 2017  
 Laboratory Reference: 1710-062  
 Project: 4082-039-01

PAHs EPA 8270D/SIM

Matrix: Soil  
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>FL363-B5-5.5-6.5</b>					
Laboratory ID:	10-062-09					
Naphthalene	<b>0.029</b>	0.0073	EPA 8270D/SIM	10-6-17	10-6-17	
2-Methylnaphthalene	<b>ND</b>	0.0073	EPA 8270D/SIM	10-6-17	10-6-17	
1-Methylnaphthalene	<b>ND</b>	0.0073	EPA 8270D/SIM	10-6-17	10-6-17	
Acenaphthylene	<b>ND</b>	0.0073	EPA 8270D/SIM	10-6-17	10-6-17	
Acenaphthene	<b>ND</b>	0.0073	EPA 8270D/SIM	10-6-17	10-6-17	
Fluorene	<b>ND</b>	0.0073	EPA 8270D/SIM	10-6-17	10-6-17	
Phenanthrene	<b>ND</b>	0.0073	EPA 8270D/SIM	10-6-17	10-6-17	
Anthracene	<b>ND</b>	0.0073	EPA 8270D/SIM	10-6-17	10-6-17	
Fluoranthene	<b>ND</b>	0.0073	EPA 8270D/SIM	10-6-17	10-6-17	
Pyrene	<b>ND</b>	0.0073	EPA 8270D/SIM	10-6-17	10-6-17	
Benzo[a]anthracene	<b>ND</b>	0.0073	EPA 8270D/SIM	10-6-17	10-6-17	
Chrysene	<b>ND</b>	0.0073	EPA 8270D/SIM	10-6-17	10-6-17	
Benzo[b]fluoranthene	<b>ND</b>	0.0073	EPA 8270D/SIM	10-6-17	10-6-17	
Benzo(j,k)fluoranthene	<b>ND</b>	0.0073	EPA 8270D/SIM	10-6-17	10-6-17	
Benzo[a]pyrene	<b>ND</b>	0.0073	EPA 8270D/SIM	10-6-17	10-6-17	
Indeno(1,2,3-c,d)pyrene	<b>ND</b>	0.0073	EPA 8270D/SIM	10-6-17	10-6-17	
Dibenz[a,h]anthracene	<b>ND</b>	0.0073	EPA 8270D/SIM	10-6-17	10-6-17	
Benzo[g,h,i]perylene	<b>ND</b>	0.0073	EPA 8270D/SIM	10-6-17	10-6-17	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>2-Fluorobiphenyl</i>	<i>66</i>	<i>32 - 122</i>				
<i>Pyrene-d10</i>	<i>71</i>	<i>33 - 125</i>				
<i>Terphenyl-d14</i>	<i>71</i>	<i>36 - 118</i>				



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 Project: 4082-039-01

PAHs EPA 8270D/SIM

Matrix: Soil  
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>FL363-B5-11.5-12.5</b>					
Laboratory ID:	10-062-10					
Naphthalene	1.3	0.040	EPA 8270D/SIM	10-6-17	10-9-17	
2-Methylnaphthalene	1.0	0.040	EPA 8270D/SIM	10-6-17	10-9-17	
1-Methylnaphthalene	0.55	0.0080	EPA 8270D/SIM	10-6-17	10-6-17	
Acenaphthylene	ND	0.0080	EPA 8270D/SIM	10-6-17	10-6-17	
Acenaphthene	ND	0.0080	EPA 8270D/SIM	10-6-17	10-6-17	
Fluorene	ND	0.0080	EPA 8270D/SIM	10-6-17	10-6-17	
Phenanthrene	ND	0.0080	EPA 8270D/SIM	10-6-17	10-6-17	
Anthracene	ND	0.0080	EPA 8270D/SIM	10-6-17	10-6-17	
Fluoranthene	ND	0.0080	EPA 8270D/SIM	10-6-17	10-6-17	
Pyrene	ND	0.0080	EPA 8270D/SIM	10-6-17	10-6-17	
Benzo[a]anthracene	ND	0.0080	EPA 8270D/SIM	10-6-17	10-6-17	
Chrysene	ND	0.0080	EPA 8270D/SIM	10-6-17	10-6-17	
Benzo[b]fluoranthene	ND	0.0080	EPA 8270D/SIM	10-6-17	10-6-17	
Benzo(j,k)fluoranthene	ND	0.0080	EPA 8270D/SIM	10-6-17	10-6-17	
Benzo[a]pyrene	ND	0.0080	EPA 8270D/SIM	10-6-17	10-6-17	
Indeno(1,2,3-c,d)pyrene	ND	0.0080	EPA 8270D/SIM	10-6-17	10-6-17	
Dibenz[a,h]anthracene	ND	0.0080	EPA 8270D/SIM	10-6-17	10-6-17	
Benzo[g,h,i]perylene	ND	0.0080	EPA 8270D/SIM	10-6-17	10-6-17	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
2-Fluorobiphenyl	72	32 - 122				
Pyrene-d10	69	33 - 125				
Terphenyl-d14	77	36 - 118				



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 Project: 4082-039-01

**PAHs EPA 8270D/SIM**

Matrix: Soil  
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>FL363-B5-17-18</b>					
Laboratory ID:	10-062-11					
Naphthalene	ND	0.0073	EPA 8270D/SIM	10-6-17	10-6-17	
2-Methylnaphthalene	ND	0.0073	EPA 8270D/SIM	10-6-17	10-6-17	
1-Methylnaphthalene	ND	0.0073	EPA 8270D/SIM	10-6-17	10-6-17	
Acenaphthylene	ND	0.0073	EPA 8270D/SIM	10-6-17	10-6-17	
Acenaphthene	ND	0.0073	EPA 8270D/SIM	10-6-17	10-6-17	
Fluorene	ND	0.0073	EPA 8270D/SIM	10-6-17	10-6-17	
Phenanthrene	ND	0.0073	EPA 8270D/SIM	10-6-17	10-6-17	
Anthracene	ND	0.0073	EPA 8270D/SIM	10-6-17	10-6-17	
Fluoranthene	ND	0.0073	EPA 8270D/SIM	10-6-17	10-6-17	
Pyrene	ND	0.0073	EPA 8270D/SIM	10-6-17	10-6-17	
Benzo[a]anthracene	ND	0.0073	EPA 8270D/SIM	10-6-17	10-6-17	
Chrysene	ND	0.0073	EPA 8270D/SIM	10-6-17	10-6-17	
Benzo[b]fluoranthene	ND	0.0073	EPA 8270D/SIM	10-6-17	10-6-17	
Benzo(j,k)fluoranthene	ND	0.0073	EPA 8270D/SIM	10-6-17	10-6-17	
Benzo[a]pyrene	ND	0.0073	EPA 8270D/SIM	10-6-17	10-6-17	
Indeno(1,2,3-c,d)pyrene	ND	0.0073	EPA 8270D/SIM	10-6-17	10-6-17	
Dibenz[a,h]anthracene	ND	0.0073	EPA 8270D/SIM	10-6-17	10-6-17	
Benzo[g,h,i]perylene	ND	0.0073	EPA 8270D/SIM	10-6-17	10-6-17	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>2-Fluorobiphenyl</i>	<i>79</i>	<i>32 - 122</i>				
<i>Pyrene-d10</i>	<i>82</i>	<i>33 - 125</i>				
<i>Terphenyl-d14</i>	<i>93</i>	<i>36 - 118</i>				



Date of Report: October 12, 2017  
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 Project: 4082-039-01

**PAHs EPA 8270D/SIM**

Matrix: Soil  
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>FL363-B6-6-7</b>					
Laboratory ID:	10-062-14					
Naphthalene	ND	0.0073	EPA 8270D/SIM	10-6-17	10-6-17	
2-Methylnaphthalene	ND	0.0073	EPA 8270D/SIM	10-6-17	10-6-17	
1-Methylnaphthalene	ND	0.0073	EPA 8270D/SIM	10-6-17	10-6-17	
Acenaphthylene	ND	0.0073	EPA 8270D/SIM	10-6-17	10-6-17	
Acenaphthene	ND	0.0073	EPA 8270D/SIM	10-6-17	10-6-17	
Fluorene	ND	0.0073	EPA 8270D/SIM	10-6-17	10-6-17	
Phenanthrene	ND	0.0073	EPA 8270D/SIM	10-6-17	10-6-17	
Anthracene	ND	0.0073	EPA 8270D/SIM	10-6-17	10-6-17	
Fluoranthene	ND	0.0073	EPA 8270D/SIM	10-6-17	10-6-17	
Pyrene	ND	0.0073	EPA 8270D/SIM	10-6-17	10-6-17	
Benzo[a]anthracene	ND	0.0073	EPA 8270D/SIM	10-6-17	10-6-17	
Chrysene	ND	0.0073	EPA 8270D/SIM	10-6-17	10-6-17	
Benzo[b]fluoranthene	ND	0.0073	EPA 8270D/SIM	10-6-17	10-6-17	
Benzo(j,k)fluoranthene	ND	0.0073	EPA 8270D/SIM	10-6-17	10-6-17	
Benzo[a]pyrene	ND	0.0073	EPA 8270D/SIM	10-6-17	10-6-17	
Indeno(1,2,3-c,d)pyrene	ND	0.0073	EPA 8270D/SIM	10-6-17	10-6-17	
Dibenz[a,h]anthracene	ND	0.0073	EPA 8270D/SIM	10-6-17	10-6-17	
Benzo[g,h,i]perylene	ND	0.0073	EPA 8270D/SIM	10-6-17	10-6-17	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>2-Fluorobiphenyl</i>	<i>73</i>	<i>32 - 122</i>				
<i>Pyrene-d10</i>	<i>77</i>	<i>33 - 125</i>				
<i>Terphenyl-d14</i>	<i>90</i>	<i>36 - 118</i>				



Date of Report: October 12, 2017  
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 Laboratory Reference: 1710-062  
 Project: 4082-039-01

PAHs EPA 8270D/SIM

Matrix: Soil  
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>FL363-B6-11-12</b>					
<b>Laboratory ID:</b>	<b>10-062-15</b>					
Naphthalene	<b>0.0099</b>	0.0096	EPA 8270D/SIM	10-6-17	10-6-17	
2-Methylnaphthalene	<b>ND</b>	0.0096	EPA 8270D/SIM	10-6-17	10-6-17	
1-Methylnaphthalene	<b>ND</b>	0.0096	EPA 8270D/SIM	10-6-17	10-6-17	
Acenaphthylene	<b>ND</b>	0.0096	EPA 8270D/SIM	10-6-17	10-6-17	
Acenaphthene	<b>ND</b>	0.0096	EPA 8270D/SIM	10-6-17	10-6-17	
Fluorene	<b>ND</b>	0.0096	EPA 8270D/SIM	10-6-17	10-6-17	
Phenanthrene	<b>ND</b>	0.0096	EPA 8270D/SIM	10-6-17	10-6-17	
Anthracene	<b>ND</b>	0.0096	EPA 8270D/SIM	10-6-17	10-6-17	
Fluoranthene	<b>ND</b>	0.0096	EPA 8270D/SIM	10-6-17	10-6-17	
Pyrene	<b>ND</b>	0.0096	EPA 8270D/SIM	10-6-17	10-6-17	
Benzo[a]anthracene	<b>ND</b>	0.0096	EPA 8270D/SIM	10-6-17	10-6-17	
Chrysene	<b>ND</b>	0.0096	EPA 8270D/SIM	10-6-17	10-6-17	
Benzo[b]fluoranthene	<b>ND</b>	0.0096	EPA 8270D/SIM	10-6-17	10-6-17	
Benzo(j,k)fluoranthene	<b>ND</b>	0.0096	EPA 8270D/SIM	10-6-17	10-6-17	
Benzo[a]pyrene	<b>ND</b>	0.0096	EPA 8270D/SIM	10-6-17	10-6-17	
Indeno(1,2,3-c,d)pyrene	<b>ND</b>	0.0096	EPA 8270D/SIM	10-6-17	10-6-17	
Dibenz[a,h]anthracene	<b>ND</b>	0.0096	EPA 8270D/SIM	10-6-17	10-6-17	
Benzo[g,h,i]perylene	<b>ND</b>	0.0096	EPA 8270D/SIM	10-6-17	10-6-17	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>2-Fluorobiphenyl</i>	<i>66</i>	<i>32 - 122</i>				
<i>Pyrene-d10</i>	<i>69</i>	<i>33 - 125</i>				
<i>Terphenyl-d14</i>	<i>83</i>	<i>36 - 118</i>				



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PAHs EPA 8270D/SIM

Matrix: Soil  
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>FL363-B6-17-18</b>					
<b>Laboratory ID:</b>	<b>10-062-16</b>					
Naphthalene	ND	0.0077	EPA 8270D/SIM	10-6-17	10-6-17	
2-Methylnaphthalene	ND	0.0077	EPA 8270D/SIM	10-6-17	10-6-17	
1-Methylnaphthalene	ND	0.0077	EPA 8270D/SIM	10-6-17	10-6-17	
Acenaphthylene	ND	0.0077	EPA 8270D/SIM	10-6-17	10-6-17	
Acenaphthene	ND	0.0077	EPA 8270D/SIM	10-6-17	10-6-17	
Fluorene	ND	0.0077	EPA 8270D/SIM	10-6-17	10-6-17	
Phenanthrene	ND	0.0077	EPA 8270D/SIM	10-6-17	10-6-17	
Anthracene	ND	0.0077	EPA 8270D/SIM	10-6-17	10-6-17	
Fluoranthene	ND	0.0077	EPA 8270D/SIM	10-6-17	10-6-17	
Pyrene	ND	0.0077	EPA 8270D/SIM	10-6-17	10-6-17	
Benzo[a]anthracene	ND	0.0077	EPA 8270D/SIM	10-6-17	10-6-17	
Chrysene	ND	0.0077	EPA 8270D/SIM	10-6-17	10-6-17	
Benzo[b]fluoranthene	ND	0.0077	EPA 8270D/SIM	10-6-17	10-6-17	
Benzo(j,k)fluoranthene	ND	0.0077	EPA 8270D/SIM	10-6-17	10-6-17	
Benzo[a]pyrene	ND	0.0077	EPA 8270D/SIM	10-6-17	10-6-17	
Indeno(1,2,3-c,d)pyrene	ND	0.0077	EPA 8270D/SIM	10-6-17	10-6-17	
Dibenz[a,h]anthracene	ND	0.0077	EPA 8270D/SIM	10-6-17	10-6-17	
Benzo[g,h,i]perylene	ND	0.0077	EPA 8270D/SIM	10-6-17	10-6-17	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>2-Fluorobiphenyl</i>	<i>73</i>	<i>32 - 122</i>				
<i>Pyrene-d10</i>	<i>75</i>	<i>33 - 125</i>				
<i>Terphenyl-d14</i>	<i>84</i>	<i>36 - 118</i>				



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PAHs EPA 8270D/SIM

Matrix: Soil  
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>FL363-B7-6-7</b>					
Laboratory ID:	10-062-19					
Naphthalene	ND	0.0074	EPA 8270D/SIM	10-6-17	10-6-17	
2-Methylnaphthalene	ND	0.0074	EPA 8270D/SIM	10-6-17	10-6-17	
1-Methylnaphthalene	ND	0.0074	EPA 8270D/SIM	10-6-17	10-6-17	
Acenaphthylene	ND	0.0074	EPA 8270D/SIM	10-6-17	10-6-17	
Acenaphthene	ND	0.0074	EPA 8270D/SIM	10-6-17	10-6-17	
Fluorene	ND	0.0074	EPA 8270D/SIM	10-6-17	10-6-17	
Phenanthrene	ND	0.0074	EPA 8270D/SIM	10-6-17	10-6-17	
Anthracene	ND	0.0074	EPA 8270D/SIM	10-6-17	10-6-17	
Fluoranthene	ND	0.0074	EPA 8270D/SIM	10-6-17	10-6-17	
Pyrene	ND	0.0074	EPA 8270D/SIM	10-6-17	10-6-17	
Benzo[a]anthracene	ND	0.0074	EPA 8270D/SIM	10-6-17	10-6-17	
Chrysene	ND	0.0074	EPA 8270D/SIM	10-6-17	10-6-17	
Benzo[b]fluoranthene	ND	0.0074	EPA 8270D/SIM	10-6-17	10-6-17	
Benzo(j,k)fluoranthene	ND	0.0074	EPA 8270D/SIM	10-6-17	10-6-17	
Benzo[a]pyrene	ND	0.0074	EPA 8270D/SIM	10-6-17	10-6-17	
Indeno(1,2,3-c,d)pyrene	ND	0.0074	EPA 8270D/SIM	10-6-17	10-6-17	
Dibenz[a,h]anthracene	ND	0.0074	EPA 8270D/SIM	10-6-17	10-6-17	
Benzo[g,h,i]perylene	ND	0.0074	EPA 8270D/SIM	10-6-17	10-6-17	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>2-Fluorobiphenyl</i>	<i>68</i>	<i>32 - 122</i>				
<i>Pyrene-d10</i>	<i>76</i>	<i>33 - 125</i>				
<i>Terphenyl-d14</i>	<i>88</i>	<i>36 - 118</i>				



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PAHs EPA 8270D/SIM

Matrix: Soil  
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>FL363-B7-10-11</b>					
Laboratory ID:	10-062-20					
Naphthalene	ND	0.0077	EPA 8270D/SIM	10-6-17	10-6-17	
2-Methylnaphthalene	ND	0.0077	EPA 8270D/SIM	10-6-17	10-6-17	
1-Methylnaphthalene	ND	0.0077	EPA 8270D/SIM	10-6-17	10-6-17	
Acenaphthylene	ND	0.0077	EPA 8270D/SIM	10-6-17	10-6-17	
Acenaphthene	ND	0.0077	EPA 8270D/SIM	10-6-17	10-6-17	
Fluorene	ND	0.0077	EPA 8270D/SIM	10-6-17	10-6-17	
Phenanthrene	ND	0.0077	EPA 8270D/SIM	10-6-17	10-6-17	
Anthracene	ND	0.0077	EPA 8270D/SIM	10-6-17	10-6-17	
Fluoranthene	ND	0.0077	EPA 8270D/SIM	10-6-17	10-6-17	
Pyrene	ND	0.0077	EPA 8270D/SIM	10-6-17	10-6-17	
Benzo[a]anthracene	ND	0.0077	EPA 8270D/SIM	10-6-17	10-6-17	
Chrysene	ND	0.0077	EPA 8270D/SIM	10-6-17	10-6-17	
Benzo[b]fluoranthene	ND	0.0077	EPA 8270D/SIM	10-6-17	10-6-17	
Benzo(j,k)fluoranthene	ND	0.0077	EPA 8270D/SIM	10-6-17	10-6-17	
Benzo[a]pyrene	ND	0.0077	EPA 8270D/SIM	10-6-17	10-6-17	
Indeno(1,2,3-c,d)pyrene	ND	0.0077	EPA 8270D/SIM	10-6-17	10-6-17	
Dibenz[a,h]anthracene	ND	0.0077	EPA 8270D/SIM	10-6-17	10-6-17	
Benzo[g,h,i]perylene	ND	0.0077	EPA 8270D/SIM	10-6-17	10-6-17	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>2-Fluorobiphenyl</i>	62	32 - 122				
<i>Pyrene-d10</i>	64	33 - 125				
<i>Terphenyl-d14</i>	74	36 - 118				



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PAHs EPA 8270D/SIM

Matrix: Soil  
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>FL363-B7-17-18</b>					
Laboratory ID:	10-062-21					
Naphthalene	ND	0.0075	EPA 8270D/SIM	10-6-17	10-6-17	
2-Methylnaphthalene	ND	0.0075	EPA 8270D/SIM	10-6-17	10-6-17	
1-Methylnaphthalene	ND	0.0075	EPA 8270D/SIM	10-6-17	10-6-17	
Acenaphthylene	ND	0.0075	EPA 8270D/SIM	10-6-17	10-6-17	
Acenaphthene	ND	0.0075	EPA 8270D/SIM	10-6-17	10-6-17	
Fluorene	ND	0.0075	EPA 8270D/SIM	10-6-17	10-6-17	
Phenanthrene	ND	0.0075	EPA 8270D/SIM	10-6-17	10-6-17	
Anthracene	ND	0.0075	EPA 8270D/SIM	10-6-17	10-6-17	
Fluoranthene	ND	0.0075	EPA 8270D/SIM	10-6-17	10-6-17	
Pyrene	ND	0.0075	EPA 8270D/SIM	10-6-17	10-6-17	
Benzo[a]anthracene	ND	0.0075	EPA 8270D/SIM	10-6-17	10-6-17	
Chrysene	ND	0.0075	EPA 8270D/SIM	10-6-17	10-6-17	
Benzo[b]fluoranthene	ND	0.0075	EPA 8270D/SIM	10-6-17	10-6-17	
Benzo(j,k)fluoranthene	ND	0.0075	EPA 8270D/SIM	10-6-17	10-6-17	
Benzo[a]pyrene	ND	0.0075	EPA 8270D/SIM	10-6-17	10-6-17	
Indeno(1,2,3-c,d)pyrene	ND	0.0075	EPA 8270D/SIM	10-6-17	10-6-17	
Dibenz[a,h]anthracene	ND	0.0075	EPA 8270D/SIM	10-6-17	10-6-17	
Benzo[g,h,i]perylene	ND	0.0075	EPA 8270D/SIM	10-6-17	10-6-17	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>2-Fluorobiphenyl</i>	69	32 - 122				
<i>Pyrene-d10</i>	72	33 - 125				
<i>Terphenyl-d14</i>	83	36 - 118				



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**TOTAL METALS  
 EPA 6010C**

Matrix: Soil  
 Units: mg/kg (ppm)

<b>Analyte</b>	<b>Result</b>	<b>PQL</b>	<b>EPA Method</b>	<b>Date Prepared</b>	<b>Date Analyzed</b>	<b>Flags</b>
<b>Lab ID: 10-062-01</b>						
<b>Client ID: FL363-B4-0-0.5</b>						
Arsenic	ND	5.3	6010C	10-11-17	10-11-17	
Lead	ND	5.3	6010C	10-11-17	10-11-17	
<b>Lab ID: 10-062-02</b>						
<b>Client ID: FL363-B4-0.5-1</b>						
Arsenic	ND	5.5	6010C	10-11-17	10-11-17	
Lead	ND	5.5	6010C	10-11-17	10-11-17	
<b>Lab ID: 10-062-03</b>						
<b>Client ID: FL363-B4-7-8</b>						
Lead	31	6.9	6010C	10-11-17	10-11-17	
<b>Lab ID: 10-062-04</b>						
<b>Client ID: FL363-B4-11-12</b>						
Lead	ND	5.8	6010C	10-11-17	10-11-17	
<b>Lab ID: 10-062-05</b>						
<b>Client ID: FL363-B4-12-13</b>						
Lead	ND	5.6	6010C	10-11-17	10-11-17	
<b>Lab ID: 10-062-06</b>						
<b>Client ID: FL363-B4-17-18</b>						
Lead	ND	6.2	6010C	10-11-17	10-11-17	



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 Project: 4082-039-01

**TOTAL METALS  
 EPA 6010C**

Matrix: Soil  
 Units: mg/kg (ppm)

<b>Analyte</b>	<b>Result</b>	<b>PQL</b>	<b>EPA Method</b>	<b>Date Prepared</b>	<b>Date Analyzed</b>	<b>Flags</b>
Lab ID:	10-062-07					
<b>Client ID:</b>	<b>FL363-B5-0-0.5</b>					
Arsenic	ND	5.3	6010C	10-11-17	10-11-17	
Lead	ND	5.3	6010C	10-11-17	10-11-17	
Lab ID:	10-062-08					
<b>Client ID:</b>	<b>FL363-B5-0.5-1</b>					
Arsenic	ND	5.6	6010C	10-11-17	10-11-17	
Lead	ND	5.6	6010C	10-11-17	10-11-17	
Lab ID:	10-062-09					
<b>Client ID:</b>	<b>FL363-B5-5.5-6.5</b>					
Lead	ND	5.5	6010C	10-11-17	10-11-17	
Lab ID:	10-062-10					
<b>Client ID:</b>	<b>FL363-B5-11.5-12.5</b>					
Lead	ND	6.0	6010C	10-11-17	10-11-17	
Lab ID:	10-062-11					
<b>Client ID:</b>	<b>FL363-B5-17-18</b>					
Lead	ND	5.4	6010C	10-11-17	10-11-17	
Lab ID:	10-062-14					
<b>Client ID:</b>	<b>FL363-B6-6-7</b>					
Lead	ND	5.5	6010C	10-11-17	10-11-17	



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**TOTAL METALS  
 EPA 6010C**

Matrix: Soil  
 Units: mg/kg (ppm)

Analyte	Result	PQL	EPA Method	Date Prepared	Date Analyzed	Flags
Lab ID:	10-062-15					
<b>Client ID:</b>	<b>FL363-B6-11-12</b>					
Lead	<b>23</b>	7.2	6010C	10-11-17	10-11-17	
Lab ID:	10-062-16					
<b>Client ID:</b>	<b>FL363-B6-17-18</b>					
Lead	<b>ND</b>	5.7	6010C	10-11-17	10-11-17	
Lab ID:	10-062-17					
<b>Client ID:</b>	<b>FL363-B7-0-0.5</b>					
Arsenic	<b>ND</b>	5.6	6010C	10-11-17	10-11-17	
Lead	<b>ND</b>	5.6	6010C	10-11-17	10-11-17	



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**TOTAL METALS  
 EPA 6010C**

Matrix: Soil  
 Units: mg/kg (ppm)

<b>Analyte</b>	<b>Result</b>	<b>PQL</b>	<b>EPA Method</b>	<b>Date Prepared</b>	<b>Date Analyzed</b>	<b>Flags</b>
Lab ID:	10-062-18					
<b>Client ID:</b>	<b>FL363-B7-0.5-1</b>					
Arsenic	<b>ND</b>	5.6	6010C	10-11-17	10-11-17	
Lead	<b>ND</b>	5.6	6010C	10-11-17	10-11-17	
Lab ID:	10-062-19					
<b>Client ID:</b>	<b>FL363-B7-6-7</b>					
Lead	<b>ND</b>	5.6	6010C	10-11-17	10-11-17	
Lab ID:	10-062-20					
<b>Client ID:</b>	<b>FL363-B7-10-11</b>					
Lead	<b>ND</b>	5.8	6010C	10-11-17	10-11-17	
Lab ID:	10-062-21					
<b>Client ID:</b>	<b>FL363-B7-17-18</b>					
Lead	<b>ND</b>	5.7	6010C	10-11-17	10-11-17	



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**NWTPH-Gx  
 QUALITY CONTROL**

Matrix: Soil  
 Units: mg/kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>METHOD BLANK</b>						
Laboratory ID:	MB1009S1					
Gasoline	<b>ND</b>	5.0	NWTPH-Gx	10-9-17	10-9-17	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Fluorobenzene</i>	90	63-124				
Laboratory ID:	MB1009S2					
Gasoline	<b>ND</b>	5.0	NWTPH-Gx	10-9-17	10-9-17	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Fluorobenzene</i>	90	63-124				

Analyte	Result	Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
<b>DUPLICATE</b>								
Laboratory ID:	10-091-01							
	ORIG	DUP						
Gasoline	<b>17.9</b>	<b>18.8</b>	NA	NA	NA	NA	5	30
<i>Surrogate:</i>								
<i>Fluorobenzene</i>			93		93	63-124		
Laboratory ID:	10-091-02							
	ORIG	DUP						
Gasoline	<b>21.8</b>	<b>24.3</b>	NA	NA	NA	NA	11	30
<i>Surrogate:</i>								
<i>Fluorobenzene</i>			96		96	63-124		



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**NWTPH-Dx  
 QUALITY CONTROL**

Matrix: Soil  
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>METHOD BLANK</b>						
Laboratory ID:	MB1006S3					
Diesel Range Organics	ND	25	NWTPH-Dx	10-6-17	10-9-17	
Lube Oil Range Organics	ND	50	NWTPH-Dx	10-6-17	10-9-17	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	57	50-150				

Analyte	Result	Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
<b>DUPLICATE</b>								
Laboratory ID:	10-062-05							
	ORIG	DUP						
Diesel Range	ND	ND	NA	NA	NA	NA	NA	U1, M1
Lube Oil Range	ND	ND	NA	NA	NA	NA	NA	
<i>Surrogate:</i>								
<i>o-Terphenyl</i>				75	74	50-150		
Laboratory ID:	10-062-11							
	ORIG	DUP						
Diesel Range	ND	ND	NA	NA	NA	NA	NA	
Lube Oil Range	ND	ND	NA	NA	NA	NA	NA	
<i>Surrogate:</i>								
<i>o-Terphenyl</i>				73	73	50-150		



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**VOLATILES by EPA 8260C**  
**METHOD BLANK QUALITY CONTROL**  
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Matrix: Soil  
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB1009S1					
Dichlorodifluoromethane	ND	0.0018	EPA 8260C	10-9-17	10-9-17	
Chloromethane	ND	0.0050	EPA 8260C	10-9-17	10-9-17	
Vinyl Chloride	ND	0.0010	EPA 8260C	10-9-17	10-9-17	
Bromomethane	ND	0.0010	EPA 8260C	10-9-17	10-9-17	
Chloroethane	ND	0.0050	EPA 8260C	10-9-17	10-9-17	
Trichlorofluoromethane	ND	0.0010	EPA 8260C	10-9-17	10-9-17	
1,1-Dichloroethene	ND	0.0010	EPA 8260C	10-9-17	10-9-17	
Acetone	ND	0.0050	EPA 8260C	10-9-17	10-9-17	
Iodomethane	ND	0.0050	EPA 8260C	10-9-17	10-9-17	
Carbon Disulfide	ND	0.0010	EPA 8260C	10-9-17	10-9-17	
Methylene Chloride	ND	0.010	EPA 8260C	10-9-17	10-9-17	
(trans) 1,2-Dichloroethene	ND	0.0010	EPA 8260C	10-9-17	10-9-17	
Methyl t-Butyl Ether	ND	0.0010	EPA 8260C	10-9-17	10-9-17	
1,1-Dichloroethane	ND	0.0010	EPA 8260C	10-9-17	10-9-17	
Vinyl Acetate	ND	0.0050	EPA 8260C	10-9-17	10-9-17	
2,2-Dichloropropane	ND	0.0010	EPA 8260C	10-9-17	10-9-17	
(cis) 1,2-Dichloroethene	ND	0.0010	EPA 8260C	10-9-17	10-9-17	
2-Butanone	ND	0.0050	EPA 8260C	10-9-17	10-9-17	
Bromochloromethane	ND	0.0010	EPA 8260C	10-9-17	10-9-17	
Chloroform	ND	0.0010	EPA 8260C	10-9-17	10-9-17	
1,1,1-Trichloroethane	ND	0.0010	EPA 8260C	10-9-17	10-9-17	
Carbon Tetrachloride	ND	0.0010	EPA 8260C	10-9-17	10-9-17	
1,1-Dichloropropene	ND	0.0010	EPA 8260C	10-9-17	10-9-17	
Benzene	ND	0.0010	EPA 8260C	10-9-17	10-9-17	
1,2-Dichloroethane	ND	0.0010	EPA 8260C	10-9-17	10-9-17	
Trichloroethene	ND	0.0010	EPA 8260C	10-9-17	10-9-17	
1,2-Dichloropropane	ND	0.0010	EPA 8260C	10-9-17	10-9-17	
Dibromomethane	ND	0.0010	EPA 8260C	10-9-17	10-9-17	
Bromodichloromethane	ND	0.0010	EPA 8260C	10-9-17	10-9-17	
2-Chloroethyl Vinyl Ether	ND	0.0050	EPA 8260C	10-9-17	10-9-17	
(cis) 1,3-Dichloropropene	ND	0.0010	EPA 8260C	10-9-17	10-9-17	
Methyl Isobutyl Ketone	ND	0.0050	EPA 8260C	10-9-17	10-9-17	
Toluene	ND	0.0050	EPA 8260C	10-9-17	10-9-17	
(trans) 1,3-Dichloropropene	ND	0.0010	EPA 8260C	10-9-17	10-9-17	



Date of Report: October 12, 2017  
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 Laboratory Reference: 1710-062  
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**VOLATILES by EPA 8260C**  
**METHOD BLANK QUALITY CONTROL**  
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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:		MB1009S1				
1,1,2-Trichloroethane	ND	0.0010	EPA 8260C	10-9-17	10-9-17	
Tetrachloroethene	ND	0.0010	EPA 8260C	10-9-17	10-9-17	
1,3-Dichloropropane	ND	0.0010	EPA 8260C	10-9-17	10-9-17	
2-Hexanone	ND	0.0050	EPA 8260C	10-9-17	10-9-17	
Dibromochloromethane	ND	0.0010	EPA 8260C	10-9-17	10-9-17	
1,2-Dibromoethane	ND	0.0010	EPA 8260C	10-9-17	10-9-17	
Chlorobenzene	ND	0.0010	EPA 8260C	10-9-17	10-9-17	
1,1,1,2-Tetrachloroethane	ND	0.0010	EPA 8260C	10-9-17	10-9-17	
Ethylbenzene	ND	0.0010	EPA 8260C	10-9-17	10-9-17	
m,p-Xylene	ND	0.0020	EPA 8260C	10-9-17	10-9-17	
o-Xylene	ND	0.0010	EPA 8260C	10-9-17	10-9-17	
Styrene	ND	0.0010	EPA 8260C	10-9-17	10-9-17	
Bromoform	ND	0.0050	EPA 8260C	10-9-17	10-9-17	
Isopropylbenzene	ND	0.0010	EPA 8260C	10-9-17	10-9-17	
Bromobenzene	ND	0.0010	EPA 8260C	10-9-17	10-9-17	
1,1,2,2-Tetrachloroethane	ND	0.0010	EPA 8260C	10-9-17	10-9-17	
1,2,3-Trichloropropane	ND	0.0010	EPA 8260C	10-9-17	10-9-17	
n-Propylbenzene	ND	0.0010	EPA 8260C	10-9-17	10-9-17	
2-Chlorotoluene	ND	0.0010	EPA 8260C	10-9-17	10-9-17	
4-Chlorotoluene	ND	0.0010	EPA 8260C	10-9-17	10-9-17	
1,3,5-Trimethylbenzene	ND	0.0010	EPA 8260C	10-9-17	10-9-17	
tert-Butylbenzene	ND	0.0010	EPA 8260C	10-9-17	10-9-17	
1,2,4-Trimethylbenzene	ND	0.0010	EPA 8260C	10-9-17	10-9-17	
sec-Butylbenzene	ND	0.0010	EPA 8260C	10-9-17	10-9-17	
1,3-Dichlorobenzene	ND	0.0010	EPA 8260C	10-9-17	10-9-17	
p-Isopropyltoluene	ND	0.0010	EPA 8260C	10-9-17	10-9-17	
1,4-Dichlorobenzene	ND	0.0010	EPA 8260C	10-9-17	10-9-17	
1,2-Dichlorobenzene	ND	0.0010	EPA 8260C	10-9-17	10-9-17	
n-Butylbenzene	ND	0.0010	EPA 8260C	10-9-17	10-9-17	
1,2-Dibromo-3-chloropropane	ND	0.0050	EPA 8260C	10-9-17	10-9-17	
1,2,4-Trichlorobenzene	ND	0.0010	EPA 8260C	10-9-17	10-9-17	
Hexachlorobutadiene	ND	0.0050	EPA 8260C	10-9-17	10-9-17	
Naphthalene	ND	0.0010	EPA 8260C	10-9-17	10-9-17	
1,2,3-Trichlorobenzene	ND	0.0010	EPA 8260C	10-9-17	10-9-17	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>103</i>	<i>73-134</i>				
<i>Toluene-d8</i>	<i>102</i>	<i>81-124</i>				
<i>4-Bromofluorobenzene</i>	<i>105</i>	<i>80-131</i>				



Date of Report: October 12, 2017  
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 Project: 4082-039-01

**VOLATILES by EPA 8260C**  
**METHOD BLANK QUALITY CONTROL**  
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Matrix: Soil  
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB1010S1					
Dichlorodifluoromethane	ND	0.0022	EPA 8260C	10-10-17	10-10-17	
Chloromethane	ND	0.0065	EPA 8260C	10-10-17	10-10-17	
Vinyl Chloride	ND	0.0010	EPA 8260C	10-10-17	10-10-17	
Bromomethane	ND	0.0010	EPA 8260C	10-10-17	10-10-17	
Chloroethane	ND	0.0050	EPA 8260C	10-10-17	10-10-17	
Trichlorofluoromethane	ND	0.0010	EPA 8260C	10-10-17	10-10-17	
1,1-Dichloroethene	ND	0.0010	EPA 8260C	10-10-17	10-10-17	
Acetone	ND	0.0050	EPA 8260C	10-10-17	10-10-17	
Iodomethane	ND	0.0069	EPA 8260C	10-10-17	10-10-17	
Carbon Disulfide	ND	0.0010	EPA 8260C	10-10-17	10-10-17	
Methylene Chloride	ND	0.010	EPA 8260C	10-10-17	10-10-17	
(trans) 1,2-Dichloroethene	ND	0.0010	EPA 8260C	10-10-17	10-10-17	
Methyl t-Butyl Ether	ND	0.0010	EPA 8260C	10-10-17	10-10-17	
1,1-Dichloroethane	ND	0.0010	EPA 8260C	10-10-17	10-10-17	
Vinyl Acetate	ND	0.0050	EPA 8260C	10-10-17	10-10-17	
2,2-Dichloropropane	ND	0.0010	EPA 8260C	10-10-17	10-10-17	
(cis) 1,2-Dichloroethene	ND	0.0010	EPA 8260C	10-10-17	10-10-17	
2-Butanone	ND	0.0050	EPA 8260C	10-10-17	10-10-17	
Bromochloromethane	ND	0.0010	EPA 8260C	10-10-17	10-10-17	
Chloroform	ND	0.0010	EPA 8260C	10-10-17	10-10-17	
1,1,1-Trichloroethane	ND	0.0010	EPA 8260C	10-10-17	10-10-17	
Carbon Tetrachloride	ND	0.0010	EPA 8260C	10-10-17	10-10-17	
1,1-Dichloropropene	ND	0.0010	EPA 8260C	10-10-17	10-10-17	
Benzene	ND	0.0010	EPA 8260C	10-10-17	10-10-17	
1,2-Dichloroethane	ND	0.0010	EPA 8260C	10-10-17	10-10-17	
Trichloroethene	ND	0.0010	EPA 8260C	10-10-17	10-10-17	
1,2-Dichloropropane	ND	0.0010	EPA 8260C	10-10-17	10-10-17	
Dibromomethane	ND	0.0010	EPA 8260C	10-10-17	10-10-17	
Bromodichloromethane	ND	0.0010	EPA 8260C	10-10-17	10-10-17	
2-Chloroethyl Vinyl Ether	ND	0.0050	EPA 8260C	10-10-17	10-10-17	
(cis) 1,3-Dichloropropene	ND	0.0010	EPA 8260C	10-10-17	10-10-17	
Methyl Isobutyl Ketone	ND	0.0050	EPA 8260C	10-10-17	10-10-17	
Toluene	ND	0.0050	EPA 8260C	10-10-17	10-10-17	
(trans) 1,3-Dichloropropene	ND	0.0010	EPA 8260C	10-10-17	10-10-17	



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**VOLATILES by EPA 8260C**  
**METHOD BLANK QUALITY CONTROL**  
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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:		MB1010S1				
1,1,2-Trichloroethane	ND	0.0010	EPA 8260C	10-10-17	10-10-17	
Tetrachloroethene	ND	0.0010	EPA 8260C	10-10-17	10-10-17	
1,3-Dichloropropane	ND	0.0010	EPA 8260C	10-10-17	10-10-17	
2-Hexanone	ND	0.0050	EPA 8260C	10-10-17	10-10-17	
Dibromochloromethane	ND	0.0010	EPA 8260C	10-10-17	10-10-17	
1,2-Dibromoethane	ND	0.0010	EPA 8260C	10-10-17	10-10-17	
Chlorobenzene	ND	0.0010	EPA 8260C	10-10-17	10-10-17	
1,1,1,2-Tetrachloroethane	ND	0.0010	EPA 8260C	10-10-17	10-10-17	
Ethylbenzene	ND	0.0010	EPA 8260C	10-10-17	10-10-17	
m,p-Xylene	ND	0.0020	EPA 8260C	10-10-17	10-10-17	
o-Xylene	ND	0.0010	EPA 8260C	10-10-17	10-10-17	
Styrene	ND	0.0010	EPA 8260C	10-10-17	10-10-17	
Bromoform	ND	0.0050	EPA 8260C	10-10-17	10-10-17	
Isopropylbenzene	ND	0.0010	EPA 8260C	10-10-17	10-10-17	
Bromobenzene	ND	0.0010	EPA 8260C	10-10-17	10-10-17	
1,1,2,2-Tetrachloroethane	ND	0.0010	EPA 8260C	10-10-17	10-10-17	
1,2,3-Trichloropropane	ND	0.0010	EPA 8260C	10-10-17	10-10-17	
n-Propylbenzene	ND	0.0010	EPA 8260C	10-10-17	10-10-17	
2-Chlorotoluene	ND	0.0010	EPA 8260C	10-10-17	10-10-17	
4-Chlorotoluene	ND	0.0010	EPA 8260C	10-10-17	10-10-17	
1,3,5-Trimethylbenzene	ND	0.0010	EPA 8260C	10-10-17	10-10-17	
tert-Butylbenzene	ND	0.0010	EPA 8260C	10-10-17	10-10-17	
1,2,4-Trimethylbenzene	ND	0.0010	EPA 8260C	10-10-17	10-10-17	
sec-Butylbenzene	ND	0.0010	EPA 8260C	10-10-17	10-10-17	
1,3-Dichlorobenzene	ND	0.0010	EPA 8260C	10-10-17	10-10-17	
p-Isopropyltoluene	ND	0.0010	EPA 8260C	10-10-17	10-10-17	
1,4-Dichlorobenzene	ND	0.0010	EPA 8260C	10-10-17	10-10-17	
1,2-Dichlorobenzene	ND	0.0010	EPA 8260C	10-10-17	10-10-17	
n-Butylbenzene	ND	0.0010	EPA 8260C	10-10-17	10-10-17	
1,2-Dibromo-3-chloropropane	ND	0.0050	EPA 8260C	10-10-17	10-10-17	
1,2,4-Trichlorobenzene	ND	0.0010	EPA 8260C	10-10-17	10-10-17	
Hexachlorobutadiene	ND	0.0050	EPA 8260C	10-10-17	10-10-17	
Naphthalene	ND	0.0010	EPA 8260C	10-10-17	10-10-17	
1,2,3-Trichlorobenzene	ND	0.0010	EPA 8260C	10-10-17	10-10-17	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>90</i>	<i>73-134</i>				
<i>Toluene-d8</i>	<i>95</i>	<i>81-124</i>				
<i>4-Bromofluorobenzene</i>	<i>104</i>	<i>80-131</i>				



Date of Report: October 12, 2017  
 Samples Submitted: October 5, 2017  
 Laboratory Reference: 1710-062  
 Project: 4082-039-01

**VOLATILES by EPA 8260C  
 SB/SBD QUALITY CONTROL**

Matrix: Soil  
 Units: mg/kg

Analyte	Result		Spike Level		Percent Recovery		Recovery	RPD		Flags
					Recovery	Limits	RPD	Limit		
<b>SPIKE BLANKS</b>										
Laboratory ID:	SB1009S1									
	SB	SBD	SB	SBD	SB	SBD				
1,1-Dichloroethene	<b>0.0489</b>	<b>0.0526</b>	0.0500	0.0500	98	105	66-127	7	15	
Benzene	<b>0.0543</b>	<b>0.0589</b>	0.0500	0.0500	109	118	76-122	8	15	
Trichloroethene	<b>0.0462</b>	<b>0.0446</b>	0.0500	0.0500	92	89	78-120	4	15	
Toluene	<b>0.0501</b>	<b>0.0520</b>	0.0500	0.0500	100	104	83-120	4	15	
Chlorobenzene	<b>0.0479</b>	<b>0.0491</b>	0.0500	0.0500	96	98	81-120	2	15	
<i>Surrogate:</i>										
<i>Dibromofluoromethane</i>					<i>109</i>	<i>101</i>	<i>73-134</i>			
<i>Toluene-d8</i>					<i>108</i>	<i>101</i>	<i>81-124</i>			
<i>4-Bromofluorobenzene</i>					<i>109</i>	<i>105</i>	<i>80-131</i>			



Date of Report: October 12, 2017  
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**VOLATILES by EPA 8260C  
 SB/SBD QUALITY CONTROL**

Matrix: Soil  
 Units: mg/kg

Analyte	Result		Spike Level		Percent Recovery		Recovery	RPD		Flags
					Recovery	Limits	RPD	Limit		
<b>SPIKE BLANKS</b>										
Laboratory ID:	SB1010S1									
	SB	SBD	SB	SBD	SB	SBD				
1,1-Dichloroethene	<b>0.0526</b>	<b>0.0526</b>	0.0500	0.0500	105	105	66-127	0	15	
Benzene	<b>0.0574</b>	<b>0.0577</b>	0.0500	0.0500	115	115	76-122	1	15	
Trichloroethene	<b>0.0393</b>	<b>0.0392</b>	0.0500	0.0500	79	78	78-120	0	15	
Toluene	<b>0.0536</b>	<b>0.0521</b>	0.0500	0.0500	107	104	83-120	3	15	
Chlorobenzene	<b>0.0464</b>	<b>0.0460</b>	0.0500	0.0500	93	92	81-120	1	15	
<i>Surrogate:</i>										
<i>Dibromofluoromethane</i>					<i>85</i>	<i>91</i>	<i>73-134</i>			
<i>Toluene-d8</i>					<i>95</i>	<i>96</i>	<i>81-124</i>			
<i>4-Bromofluorobenzene</i>					<i>103</i>	<i>103</i>	<i>80-131</i>			



Date of Report: October 12, 2017  
 Samples Submitted: October 5, 2017  
 Laboratory Reference: 1710-062  
 Project: 4082-039-01

**PAHs EPA 8270D/SIM  
 METHOD BLANK QUALITY CONTROL**

Matrix: Soil  
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID: MB1006S1						
Naphthalene	ND	0.0067	EPA 8270D/SIM	10-6-17	10-6-17	
2-Methylnaphthalene	ND	0.0067	EPA 8270D/SIM	10-6-17	10-6-17	
1-Methylnaphthalene	ND	0.0067	EPA 8270D/SIM	10-6-17	10-6-17	
Acenaphthylene	ND	0.0067	EPA 8270D/SIM	10-6-17	10-6-17	
Acenaphthene	ND	0.0067	EPA 8270D/SIM	10-6-17	10-6-17	
Fluorene	ND	0.0067	EPA 8270D/SIM	10-6-17	10-6-17	
Phenanthrene	ND	0.0067	EPA 8270D/SIM	10-6-17	10-6-17	
Anthracene	ND	0.0067	EPA 8270D/SIM	10-6-17	10-6-17	
Fluoranthene	ND	0.0067	EPA 8270D/SIM	10-6-17	10-6-17	
Pyrene	ND	0.0067	EPA 8270D/SIM	10-6-17	10-6-17	
Benzo[a]anthracene	ND	0.0067	EPA 8270D/SIM	10-6-17	10-6-17	
Chrysene	ND	0.0067	EPA 8270D/SIM	10-6-17	10-6-17	
Benzo[b]fluoranthene	ND	0.0067	EPA 8270D/SIM	10-6-17	10-6-17	
Benzo(j,k)fluoranthene	ND	0.0067	EPA 8270D/SIM	10-6-17	10-6-17	
Benzo[a]pyrene	ND	0.0067	EPA 8270D/SIM	10-6-17	10-6-17	
Indeno(1,2,3-c,d)pyrene	ND	0.0067	EPA 8270D/SIM	10-6-17	10-6-17	
Dibenz[a,h]anthracene	ND	0.0067	EPA 8270D/SIM	10-6-17	10-6-17	
Benzo[g,h,i]perylene	ND	0.0067	EPA 8270D/SIM	10-6-17	10-6-17	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>2-Fluorobiphenyl</i>	<i>86</i>	<i>32 - 122</i>				
<i>Pyrene-d10</i>	<i>87</i>	<i>33 - 125</i>				
<i>Terphenyl-d14</i>	<i>102</i>	<i>36 - 118</i>				



Date of Report: October 12, 2017  
 Samples Submitted: October 5, 2017  
 Laboratory Reference: 1710-062  
 Project: 4082-039-01

**PAHs EPA 8270D/SIM  
 SB/SBD QUALITY CONTROL**

Matrix: Soil  
 Units: mg/Kg

Analyte	Result		Spike Level		Percent Recovery		Recovery	RPD	RPD	Flags
					SB	SBD	Limits	RPD	Limit	
<b>SPIKE BLANKS</b>										
Laboratory ID:	SB1006S1									
	SB	SBD	SB	SBD	SB	SBD				
Naphthalene	<b>0.0692</b>	<b>0.0707</b>	0.0833	0.0833	83	85	58 - 114	2	18	
Acenaphthylene	<b>0.0746</b>	<b>0.0752</b>	0.0833	0.0833	90	90	54 - 127	1	15	
Acenaphthene	<b>0.0733</b>	<b>0.0733</b>	0.0833	0.0833	88	88	58 - 119	0	15	
Fluorene	<b>0.0775</b>	<b>0.0774</b>	0.0833	0.0833	93	93	60 - 123	0	15	
Phenanthrene	<b>0.0749</b>	<b>0.0736</b>	0.0833	0.0833	90	88	54 - 120	2	15	
Anthracene	<b>0.0849</b>	<b>0.0850</b>	0.0833	0.0833	102	102	55 - 152	0	15	
Fluoranthene	<b>0.0794</b>	<b>0.0773</b>	0.0833	0.0833	95	93	56 - 129	3	15	
Pyrene	<b>0.0790</b>	<b>0.0763</b>	0.0833	0.0833	95	92	60 - 126	3	15	
Benzo[a]anthracene	<b>0.0806</b>	<b>0.0780</b>	0.0833	0.0833	97	94	56 - 137	3	15	
Chrysene	<b>0.0823</b>	<b>0.0777</b>	0.0833	0.0833	99	93	59 - 122	6	15	
Benzo[b]fluoranthene	<b>0.0822</b>	<b>0.0812</b>	0.0833	0.0833	99	97	46 - 133	1	21	
Benzo(j,k)fluoranthene	<b>0.0834</b>	<b>0.0794</b>	0.0833	0.0833	100	95	47 - 129	5	21	
Benzo[a]pyrene	<b>0.0830</b>	<b>0.0800</b>	0.0833	0.0833	100	96	54 - 132	4	15	
Indeno(1,2,3-c,d)pyrene	<b>0.0823</b>	<b>0.0803</b>	0.0833	0.0833	99	96	54 - 129	2	15	
Dibenz[a,h]anthracene	<b>0.0837</b>	<b>0.0810</b>	0.0833	0.0833	100	97	59 - 122	3	15	
Benzo[g,h,i]perylene	<b>0.0832</b>	<b>0.0804</b>	0.0833	0.0833	100	97	57 - 125	3	16	
<i>Surrogate:</i>										
2-Fluorobiphenyl					86	86	32 - 122			
Pyrene-d10					89	85	33 - 125			
Terphenyl-d14					102	97	36 - 118			



Date of Report: October 12, 2017  
Samples Submitted: October 5, 2017  
Laboratory Reference: 1710-062  
Project: 4082-039-01

**TOTAL METALS  
EPA 6010C  
METHOD BLANK QUALITY CONTROL**

Date Extracted: 10-11-17  
Date Analyzed: 10-11-17  
  
Matrix: Soil  
Units: mg/kg (ppm)  
  
Lab ID: MB1011SM1

Analyte	Method	Result	PQL
Arsenic	6010C	<b>ND</b>	5.0
Lead	6010C	<b>ND</b>	5.0



Date of Report: October 12, 2017  
 Samples Submitted: October 5, 2017  
 Laboratory Reference: 1710-062  
 Project: 4082-039-01

**TOTAL METALS  
 EPA 6010C  
 DUPLICATE QUALITY CONTROL**

Date Extracted: 10-11-17  
 Date Analyzed: 10-11-17  
  
 Matrix: Soil  
 Units: mg/kg (ppm)  
  
 Lab ID: 10-062-14

Analyte	Sample Result	Duplicate Result	RPD	PQL	Flags
Arsenic	ND	ND	NA	5.0	
Lead	ND	ND	NA	5.0	



Date of Report: October 12, 2017  
 Samples Submitted: October 5, 2017  
 Laboratory Reference: 1710-062  
 Project: 4082-039-01

**TOTAL METALS  
 EPA 6010C  
 MS/MSD QUALITY CONTROL**

Date Extracted: 10-11-17

Date Analyzed: 10-11-17

Matrix: Soil

Units: mg/kg (ppm)

Lab ID: 10-062-14

Analyte	Spike Level	MS	Percent Recovery	MSD	Percent Recovery	RPD	Flags
Arsenic	100	<b>91.8</b>	92	<b>93.2</b>	93	2	
Lead	250	<b>230</b>	92	<b>232</b>	93	1	



Date of Report: October 12, 2017  
Samples Submitted: October 5, 2017  
Laboratory Reference: 1710-062  
Project: 4082-039-01

**% MOISTURE**

Date Analyzed: 10-6&11-17

Client ID	Lab ID	% Moisture
FL363-B4-0-0.5	10-062-01	6
FL363-B4-0.5-1	10-062-02	8
FL363-B4-7-8	10-062-03	28
FL363-B4-11-12	10-062-04	14
FL363-B4-12-13	10-062-05	11
FL363-B4-17-18	10-062-06	19
FL363-B5-0-0.5	10-062-07	6
FL363-B5-0.5-1	10-062-08	11
FL363-B5-5.5-6.5	10-062-09	9
FL363-B5-11.5-12.5	10-062-10	17
FL363-B5-17-18	10-062-11	8
FL363-B6-6-7	10-062-14	9
FL363-B6-11-12	10-062-15	31
FL363-B6-17-18	10-062-16	13
FL363-B7-0-0.5	10-062-17	10
FL363-B7-0.5-1	10-062-18	10
FL363-B7-6-7	10-062-19	10
FL363-B7-10-11	10-062-20	14
FL363-B7-17-18	10-062-21	12





### Data Qualifiers and Abbreviations

- A - Due to a high sample concentration, the amount spiked is insufficient for meaningful MS/MSD recovery data.
  - B - The analyte indicated was also found in the blank sample.
  - C - The duplicate RPD is outside control limits due to high result variability when analyte concentrations are within five times the quantitation limit.
  - E - The value reported exceeds the quantitation range and is an estimate.
  - F - Surrogate recovery data is not available due to the high concentration of coeluting target compounds.
  - H - The analyte indicated is a common laboratory solvent and may have been introduced during sample preparation, and be impacting the sample result.
  - I - Compound recovery is outside of the control limits.
  - J - The value reported was below the practical quantitation limit. The value is an estimate.
  - K - Sample duplicate RPD is outside control limits due to sample inhomogeneity. The sample was re-extracted and re-analyzed with similar results.
  - L - The RPD is outside of the control limits.
  - M - Hydrocarbons in the gasoline range are impacting the diesel range result.
  - M1 - Hydrocarbons in the gasoline range (toluene-naphthalene) are present in the sample.
  - N - Hydrocarbons in the lube oil range are impacting the diesel range result.
  - N1 - Hydrocarbons in diesel range are impacting lube oil range results.
  - O - Hydrocarbons indicative of heavier fuels are present in the sample and are impacting the gasoline result.
  - P - The RPD of the detected concentrations between the two columns is greater than 40.
  - Q - Surrogate recovery is outside of the control limits.
  - S - Surrogate recovery data is not available due to the necessary dilution of the sample.
  - T - The sample chromatogram is not similar to a typical \_\_\_\_\_.
  - U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.
  - U1 - The practical quantitation limit is elevated due to interferences present in the sample.
  - V - Matrix Spike/Matrix Spike Duplicate recoveries are outside control limits due to matrix effects.
  - W - Matrix Spike/Matrix Spike Duplicate RPD are outside control limits due to matrix effects.
  - X - Sample extract treated with a mercury cleanup procedure.
  - X1 - Sample extract treated with a Sulfuric acid/Silica gel cleanup procedure.
  - Y - The calibration verification for this analyte exceeded the 20% drift specified in method 8260C, and therefore the reported result should be considered an estimate. The overall performance of the calibration verification standard met the acceptance criteria of the method.
  - Z -
- ND - Not Detected at PQL  
 PQL - Practical Quantitation Limit  
 RPD - Relative Percent Difference

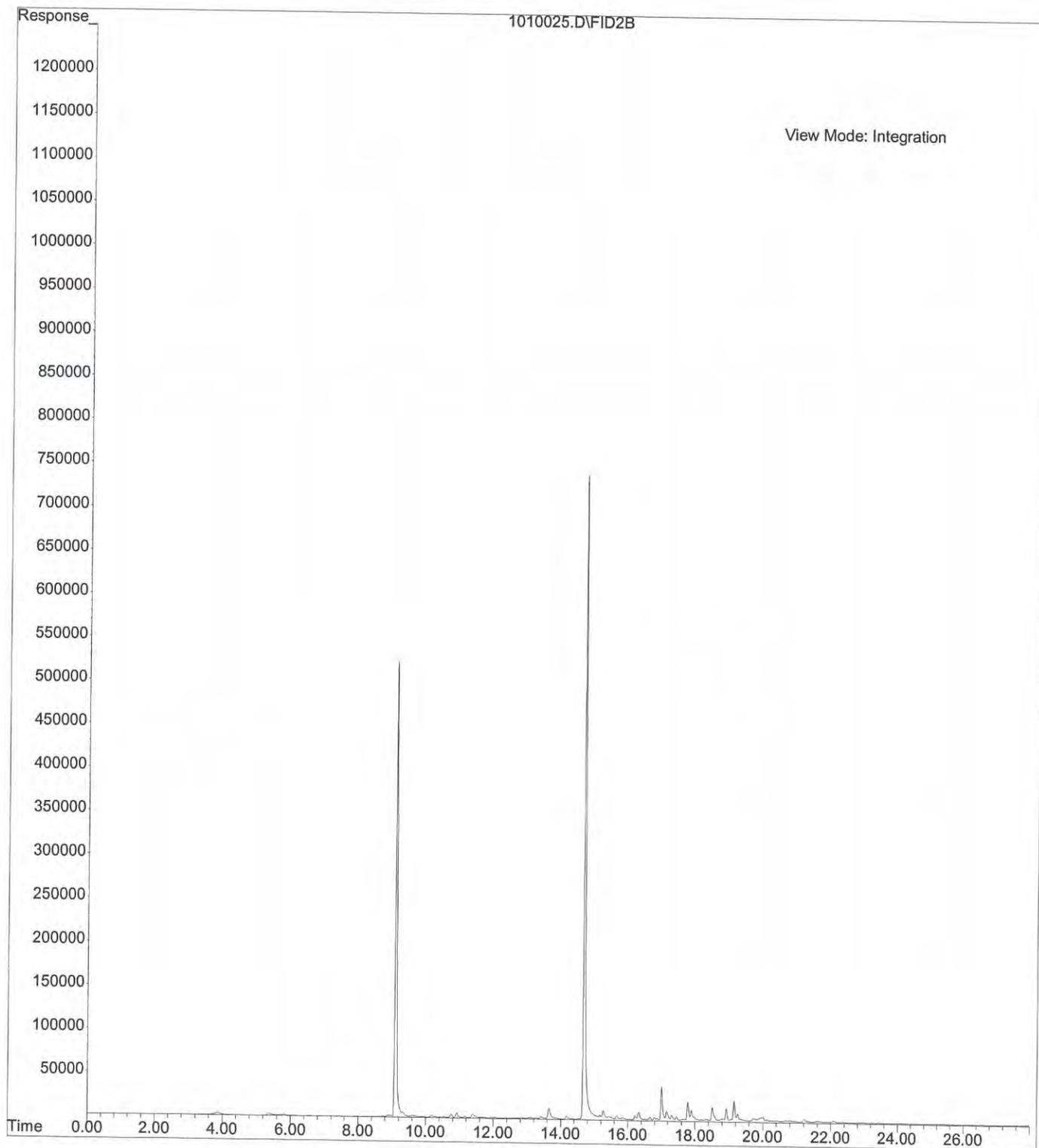




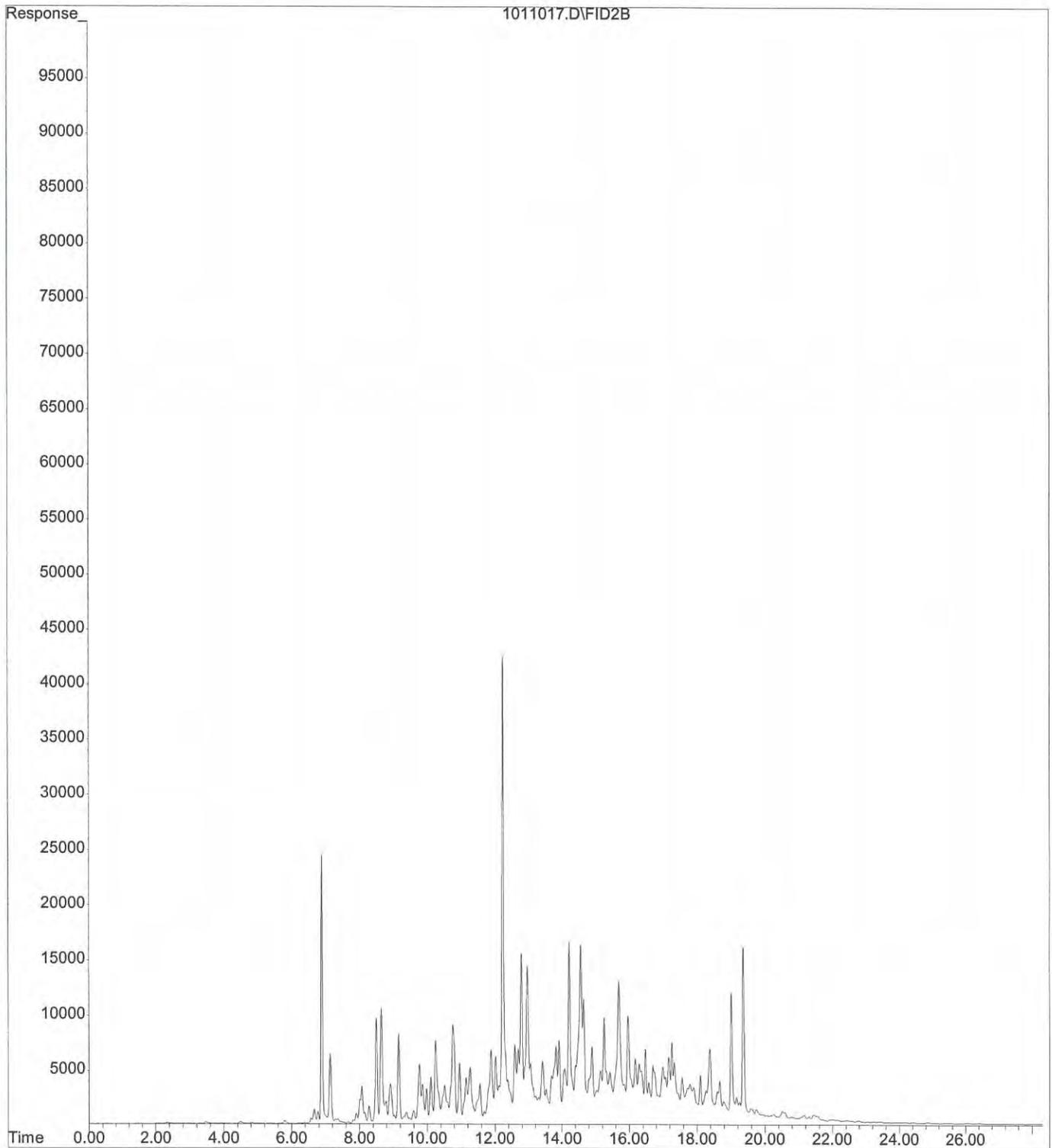




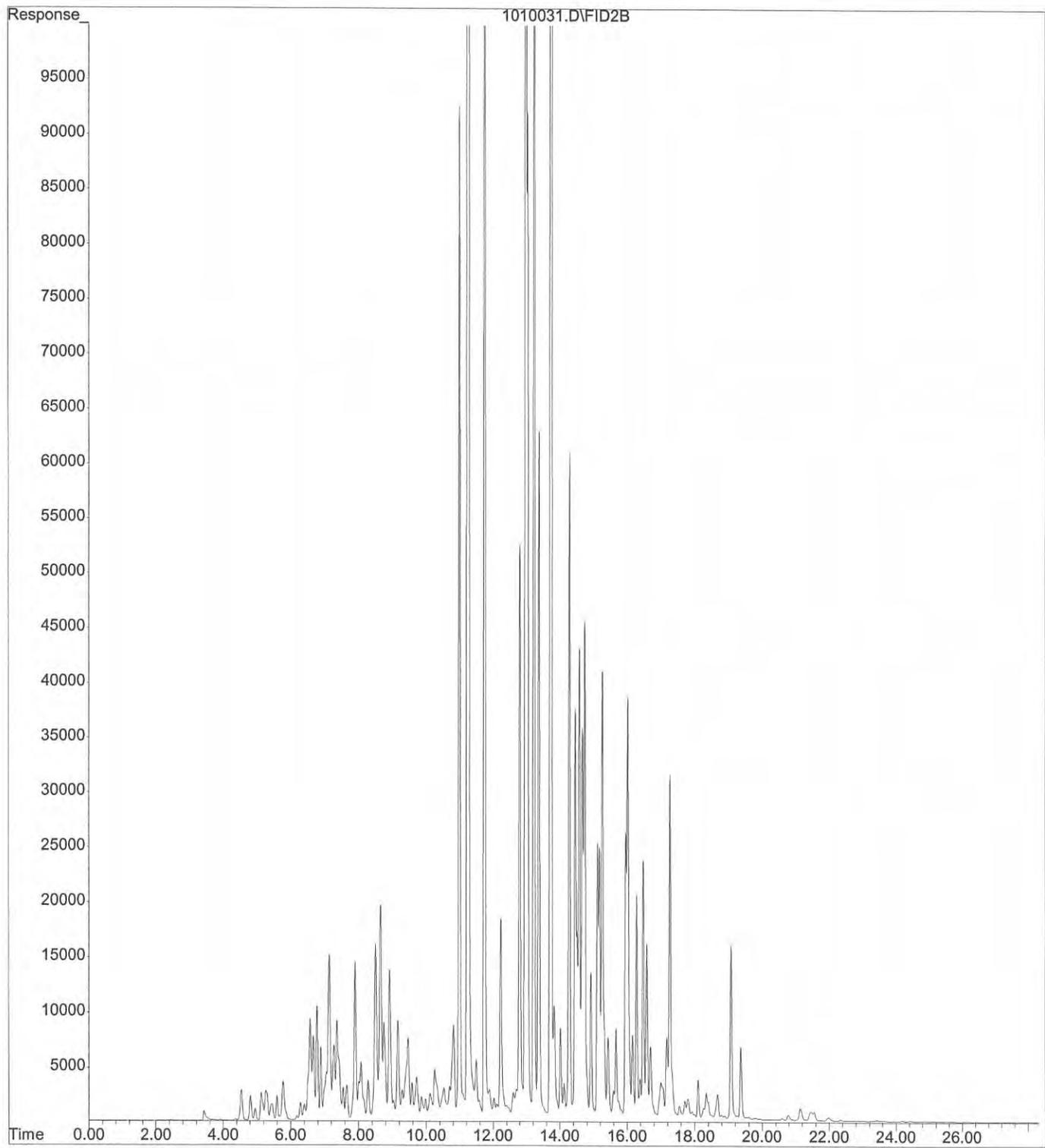
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Sample Name: 10-062-03s  
Misc Info :  
Vial Number: 25



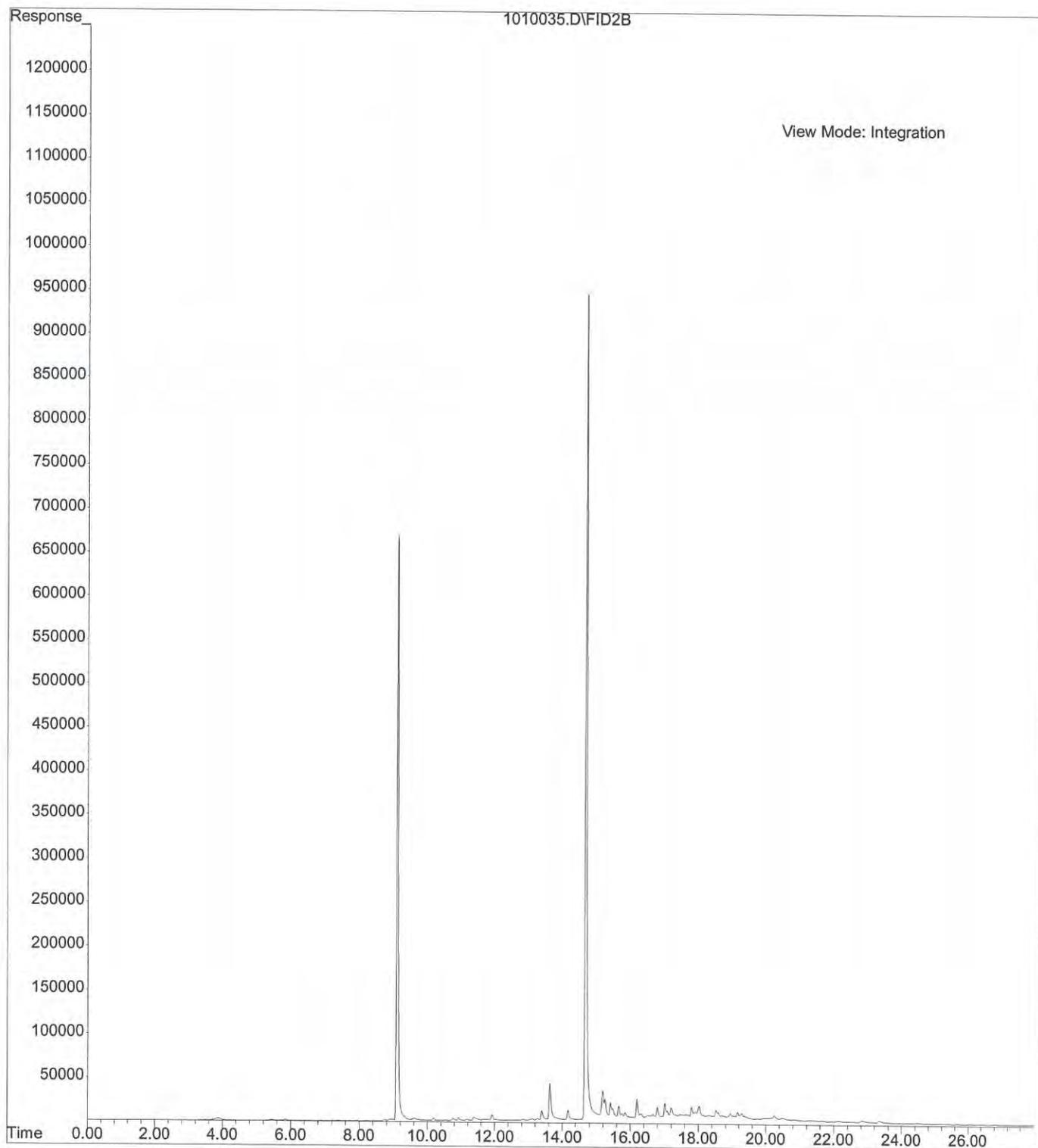
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Instrument : Daryl  
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Misc Info : ~~V2-46-16, V2-45-12~~ *SP*  
Vial Number: 16 *10-12-17*



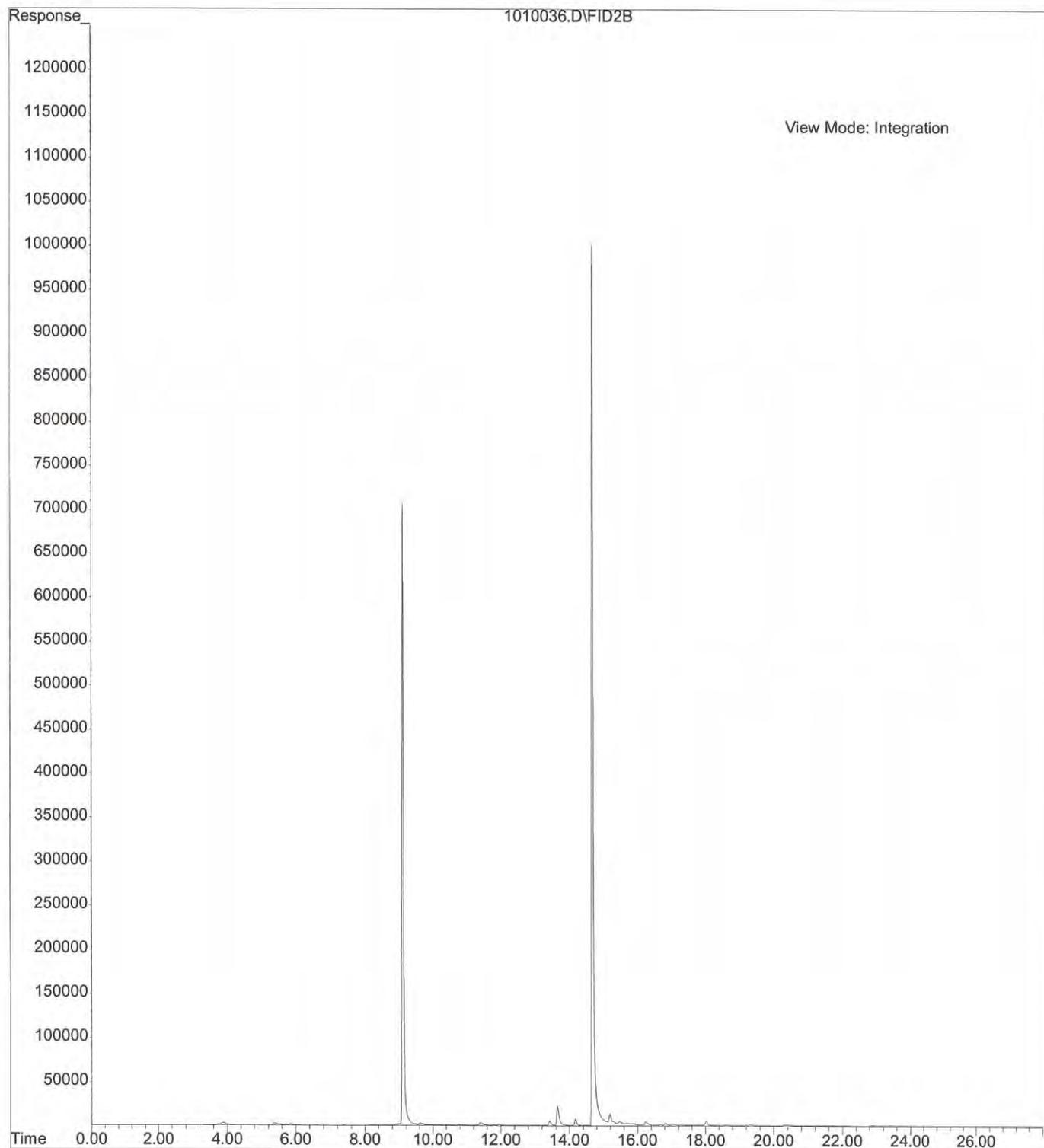
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Instrument : Daryl  
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Misc Info :  
Vial Number: 30



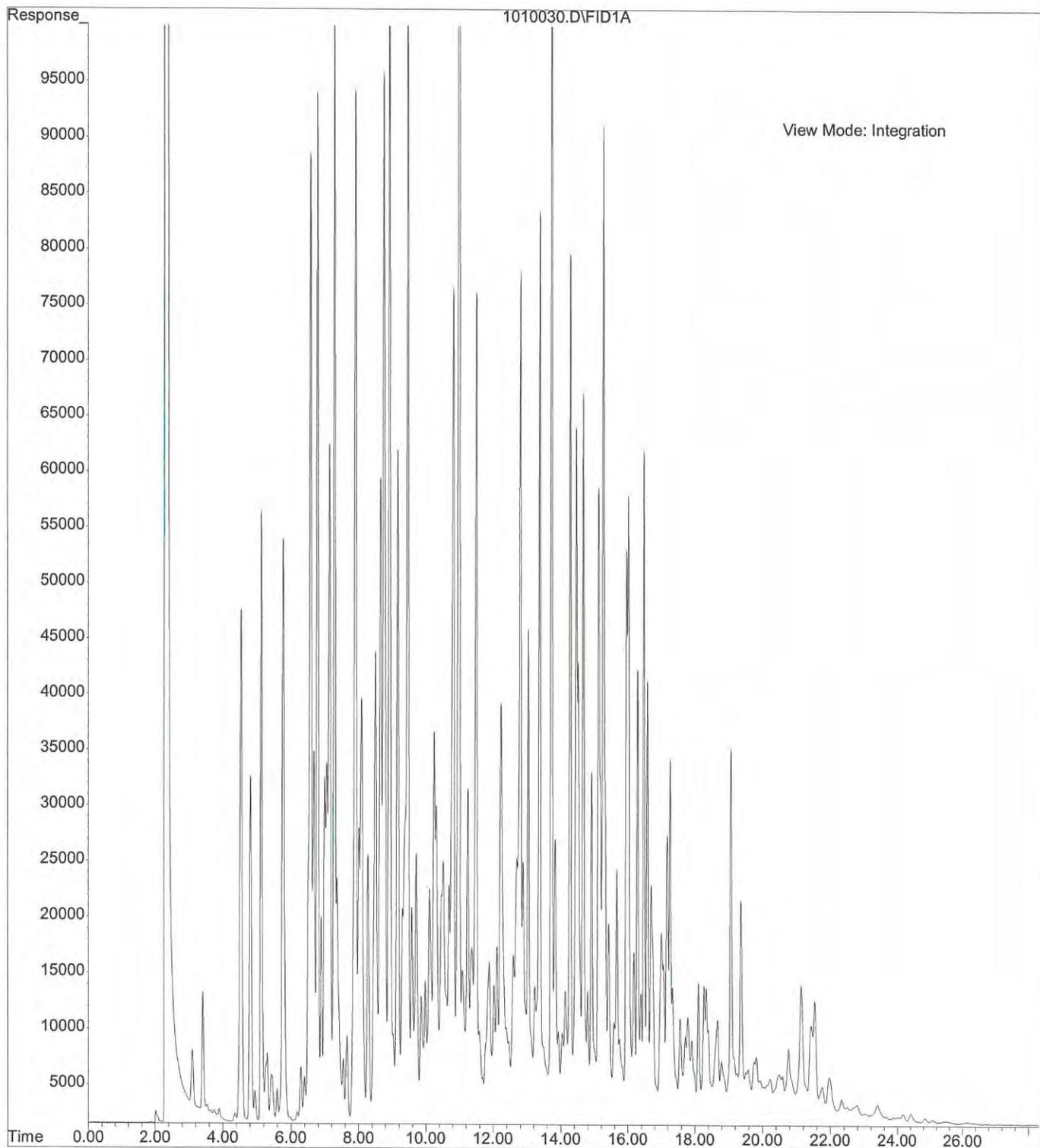
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Misc Info :  
Vial Number: 35



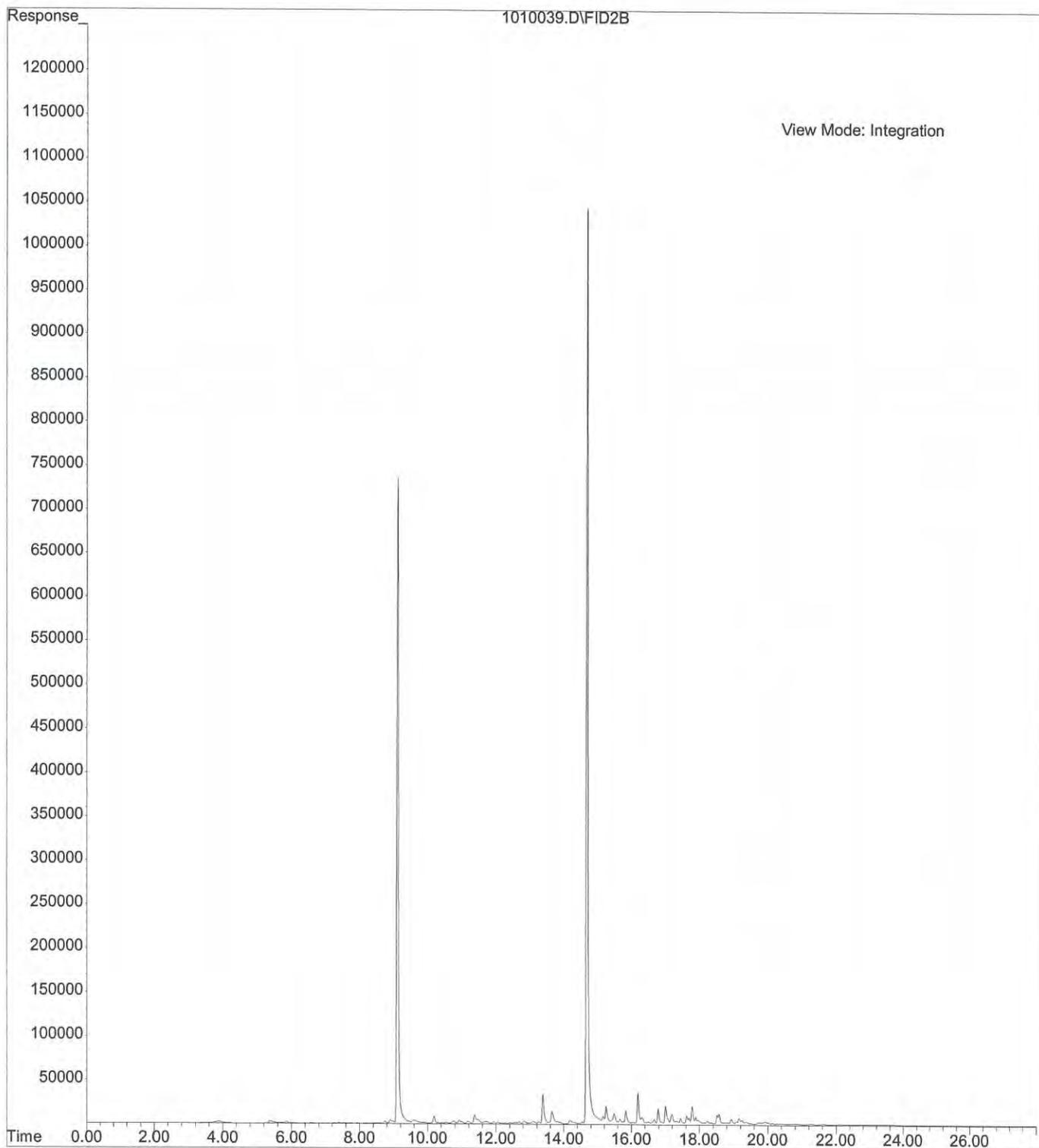
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Misc Info :  
Vial Number: 36



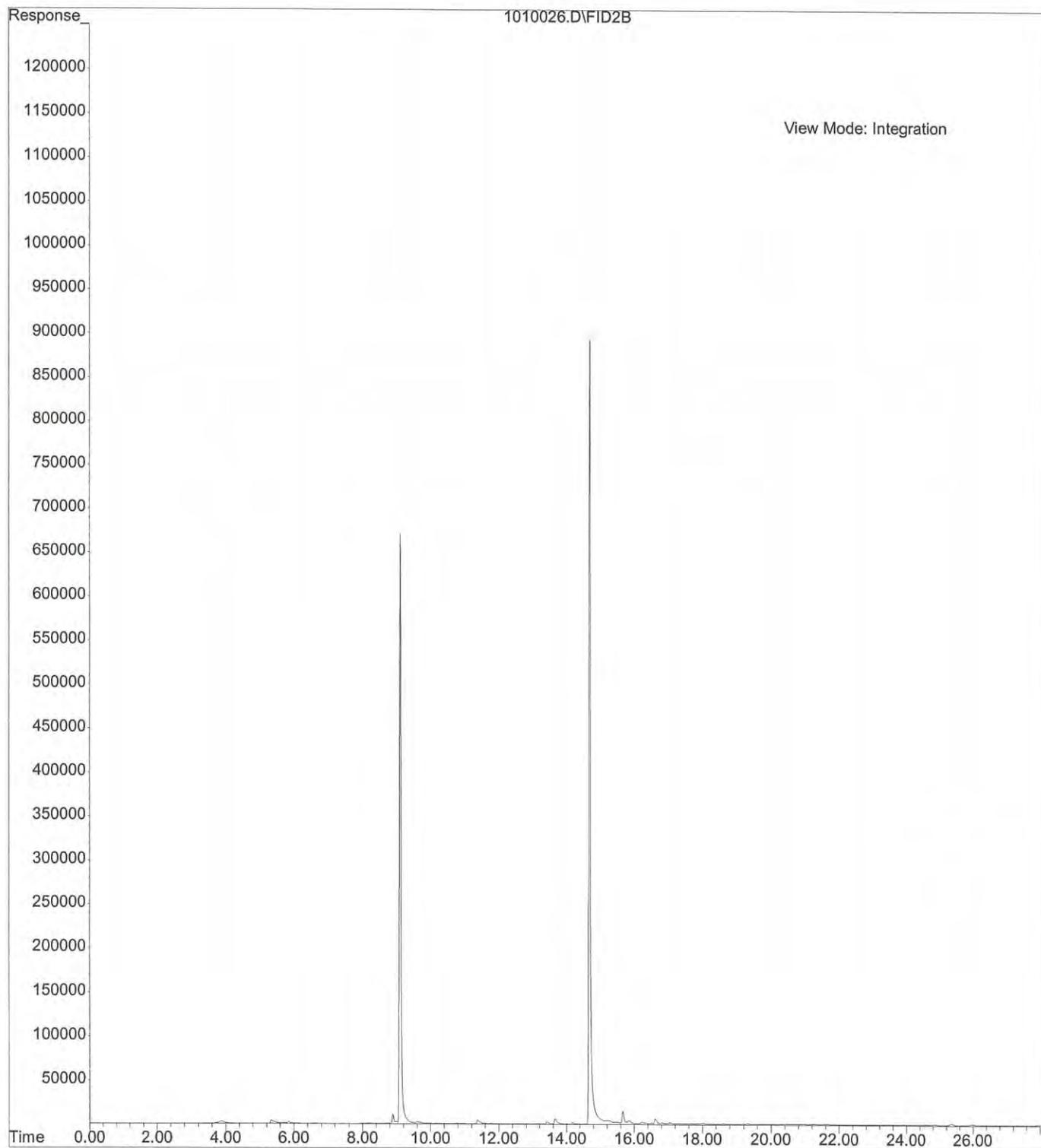
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Sample Name: 10-062-10s 1:250  
Misc Info :  
Vial Number: 29



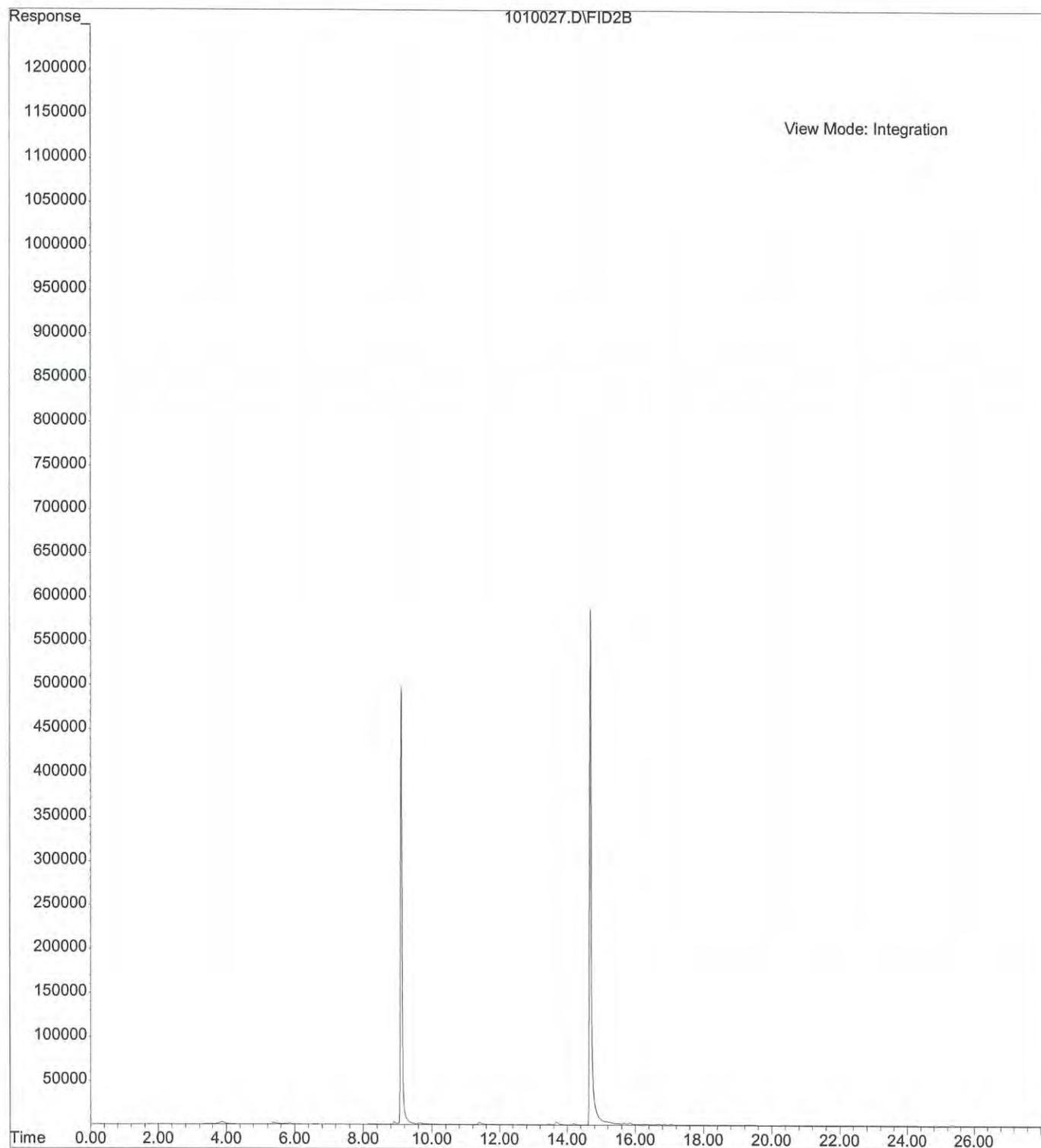
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Instrument : Hope  
Sample Name: 10-062-11s  
Misc Info :  
Vial Number: 39



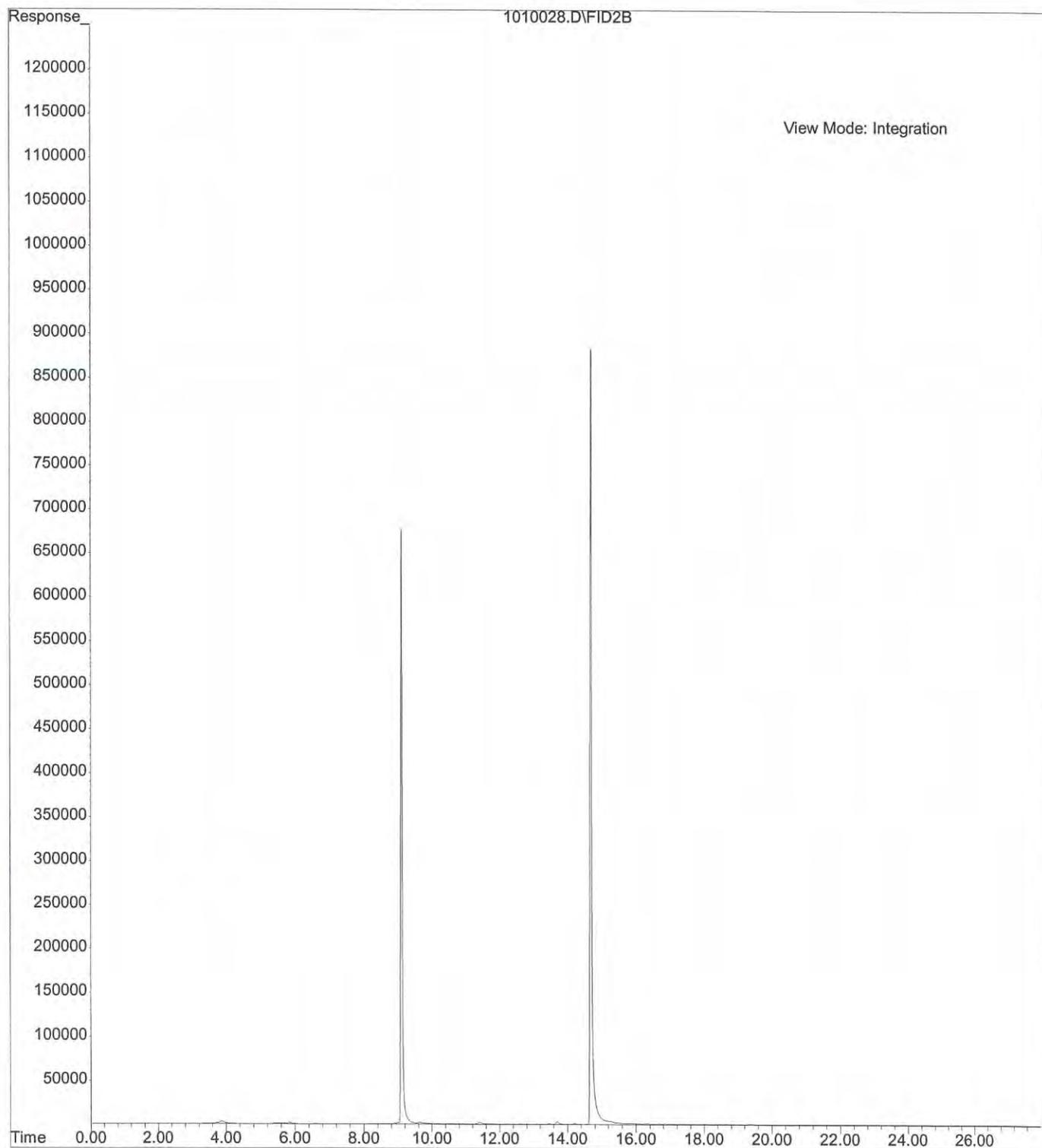
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Sample Name: 10-062-14s  
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Vial Number: 26



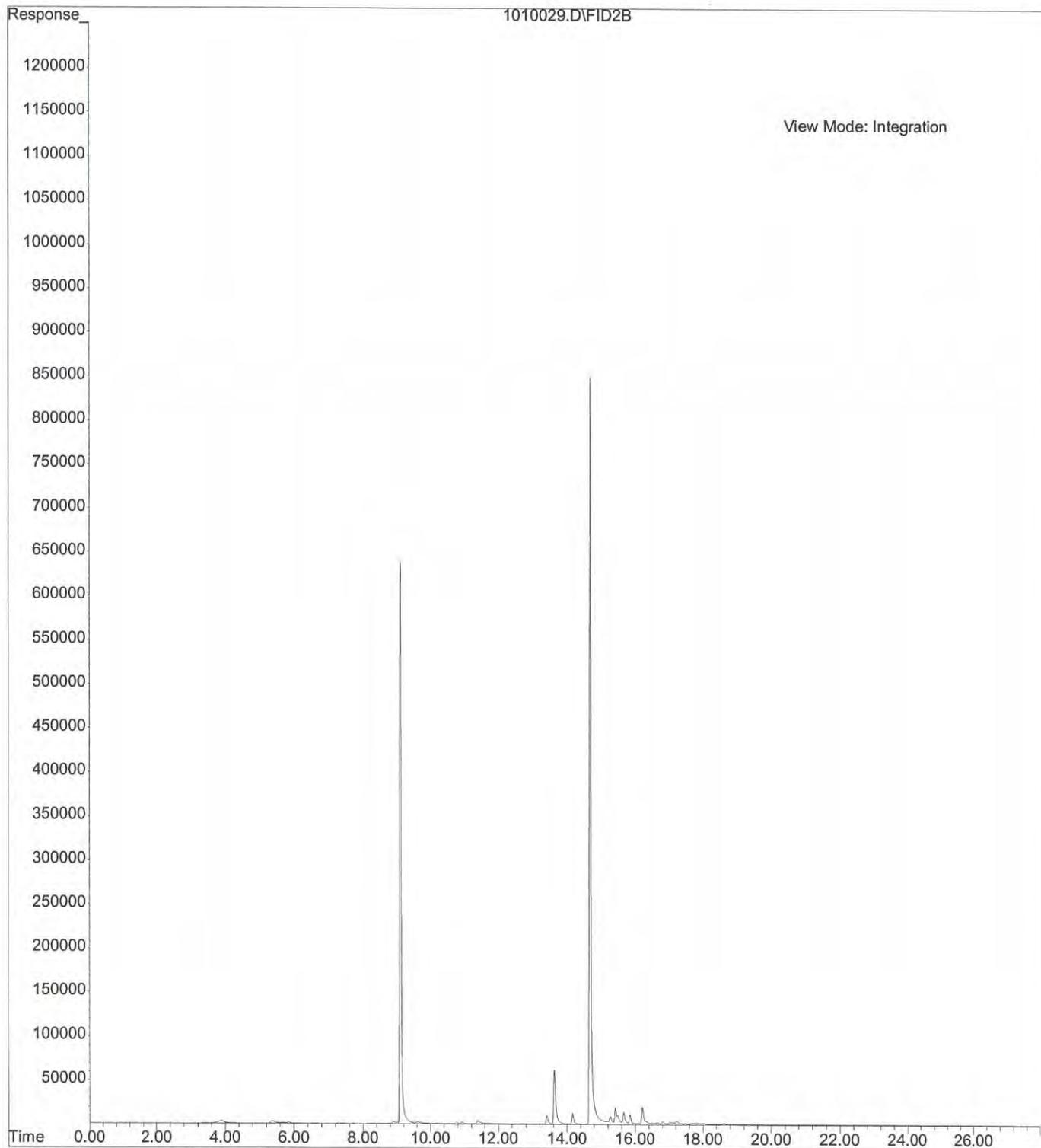
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Vial Number: 27



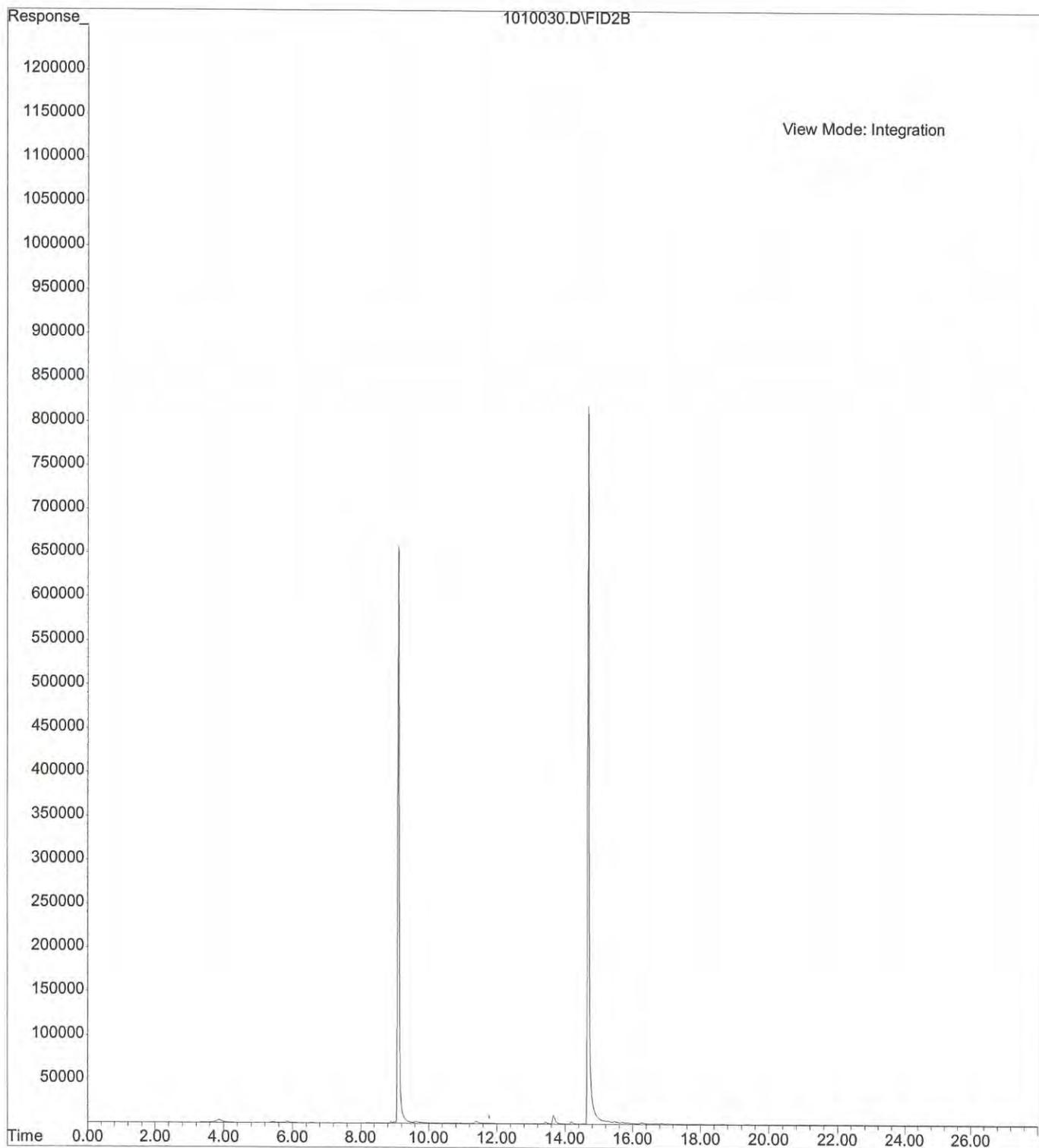
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Misc Info :  
Vial Number: 28



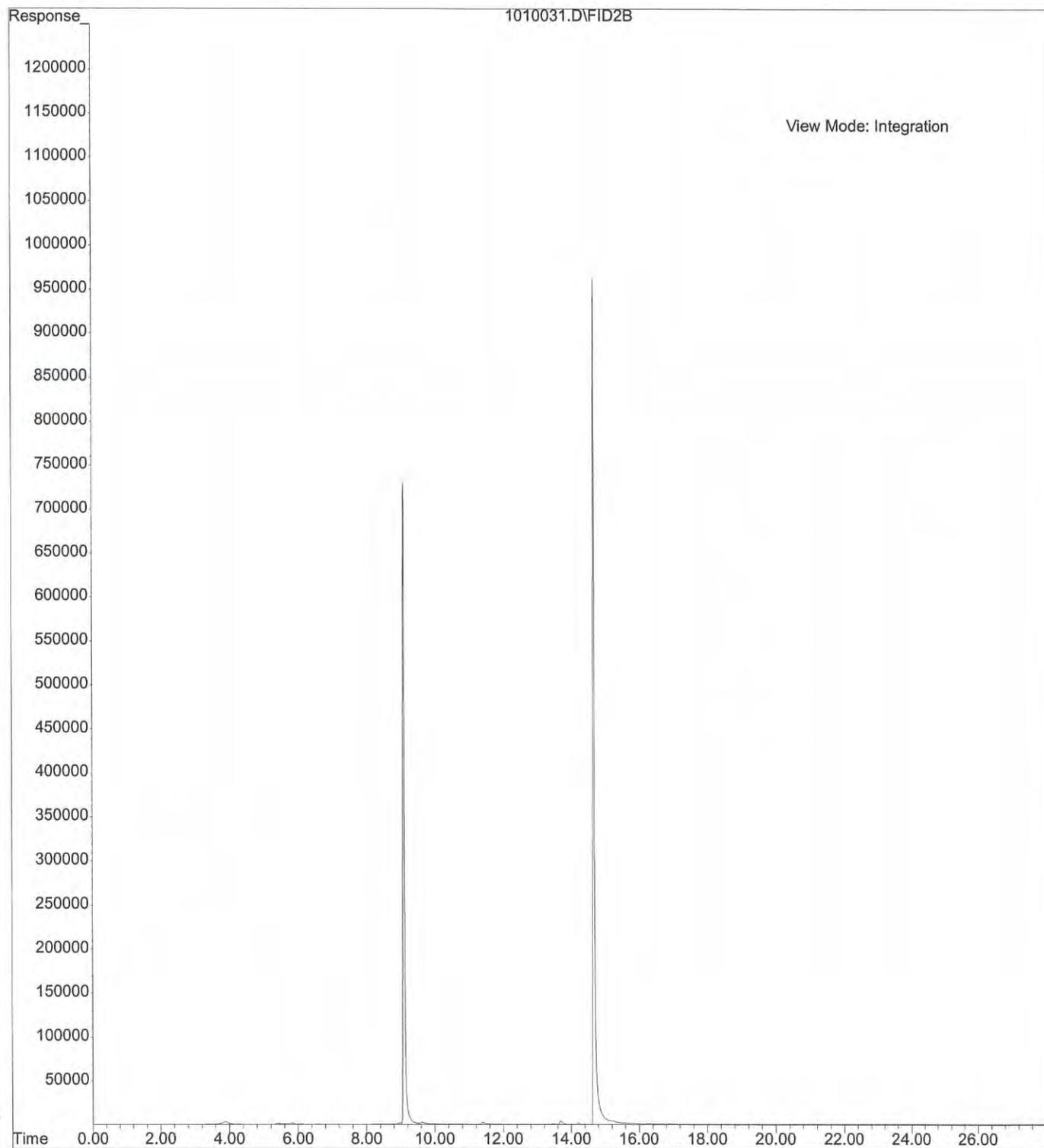
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Misc Info :  
Vial Number: 29



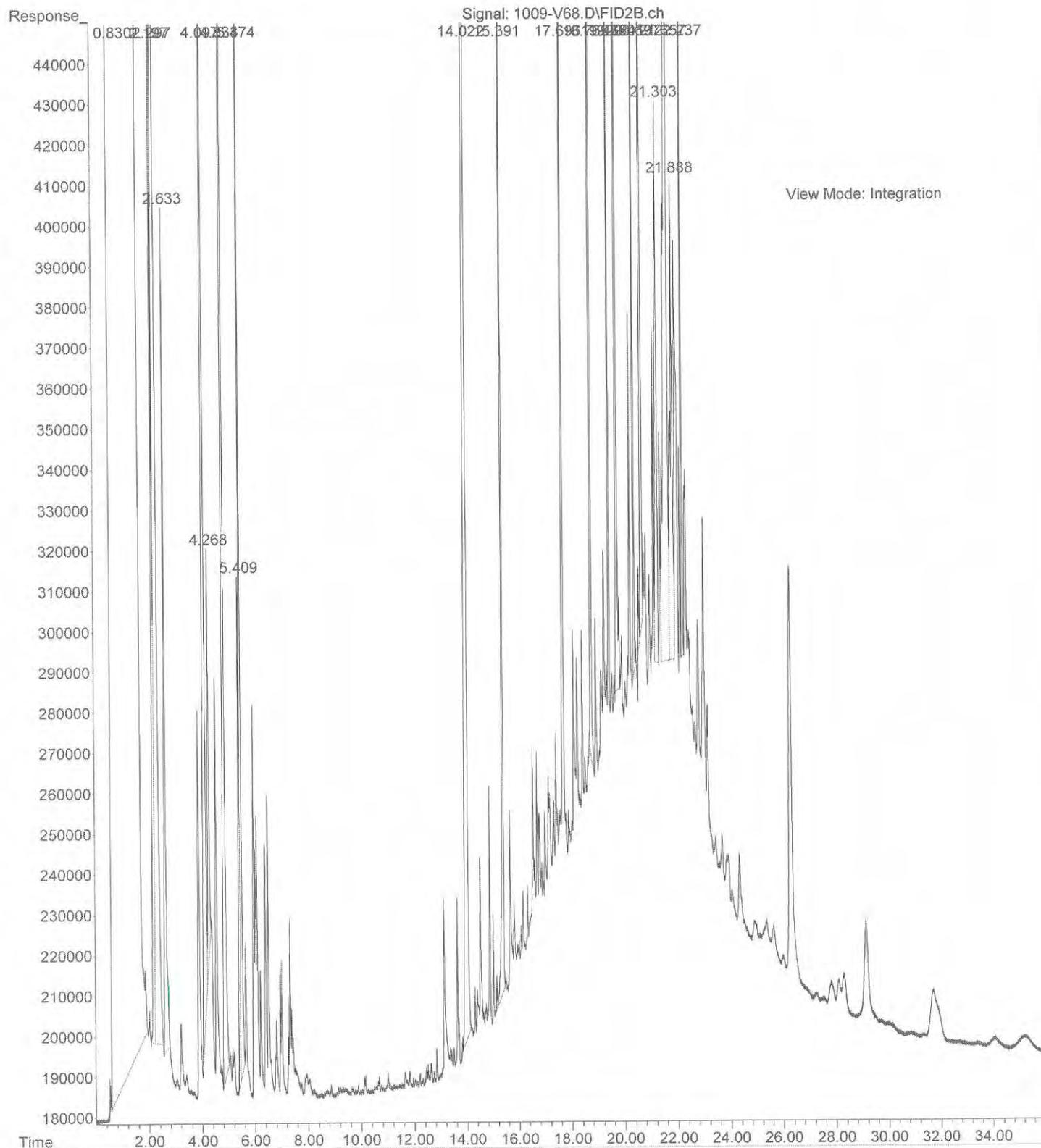
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Misc Info :  
Vial Number: 30



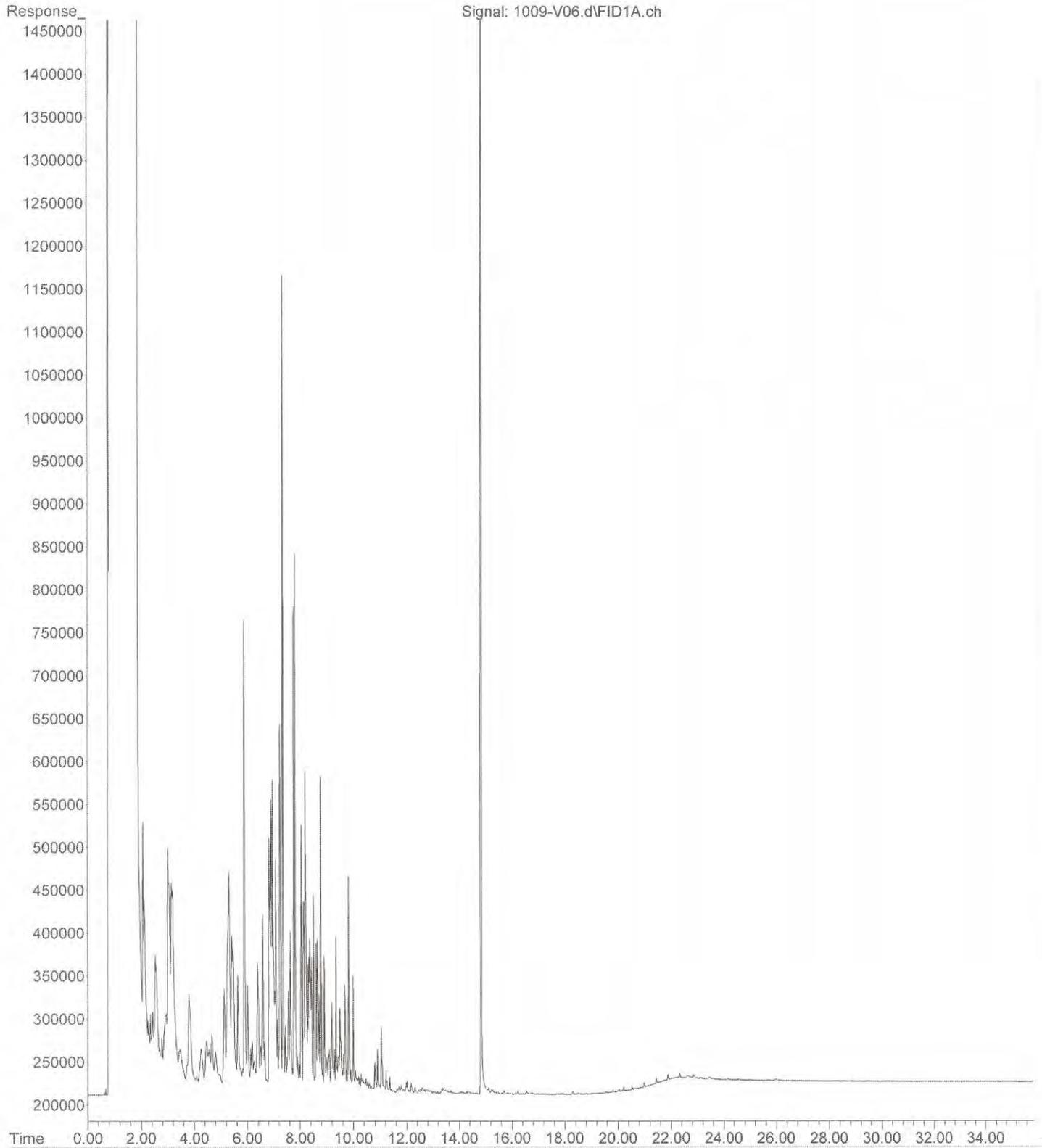
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Sample Name: 10-062-21s  
Misc Info :  
Vial Number: 31



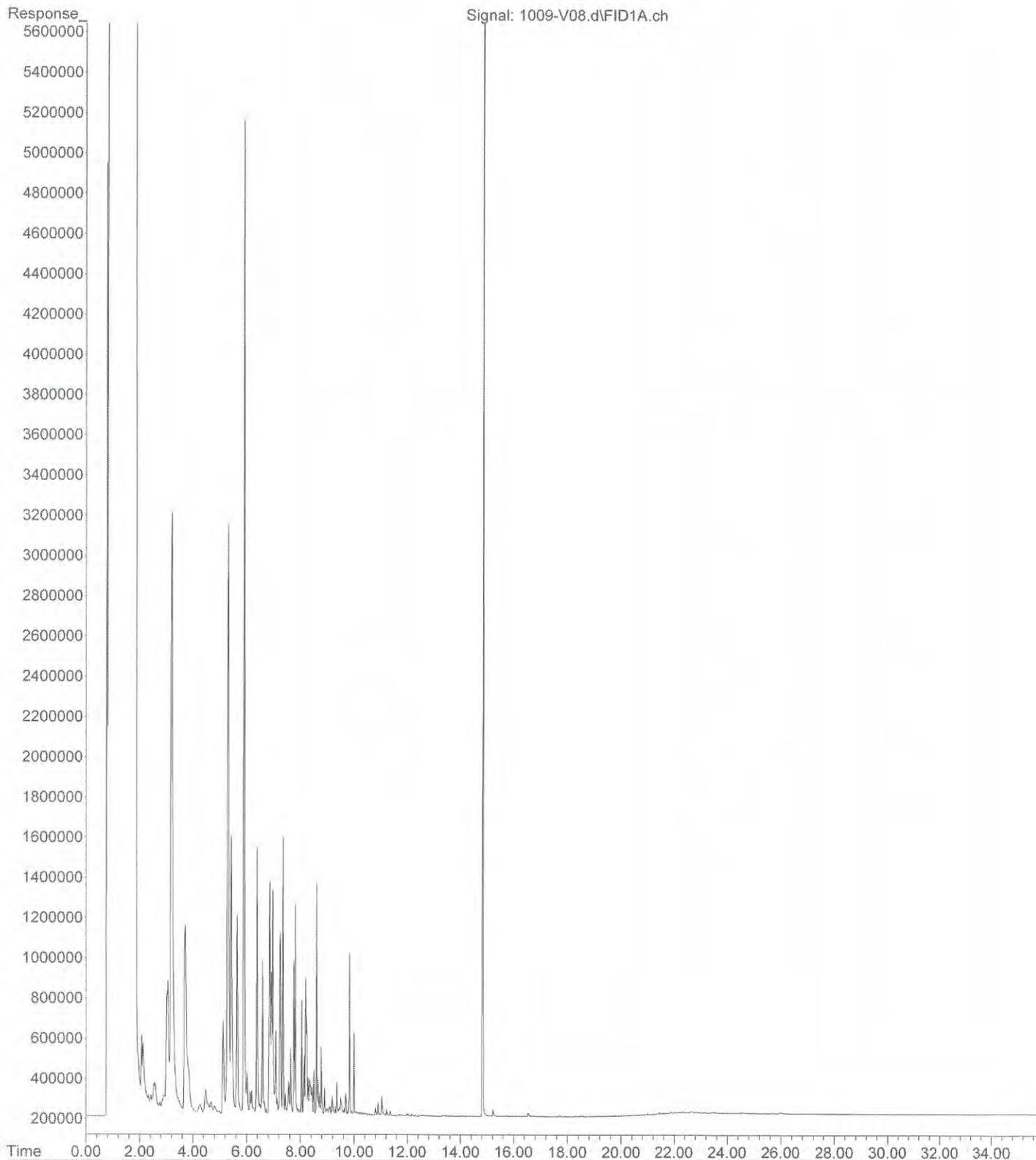
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Sample Name: 10-062-03  
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Vial Number: 68



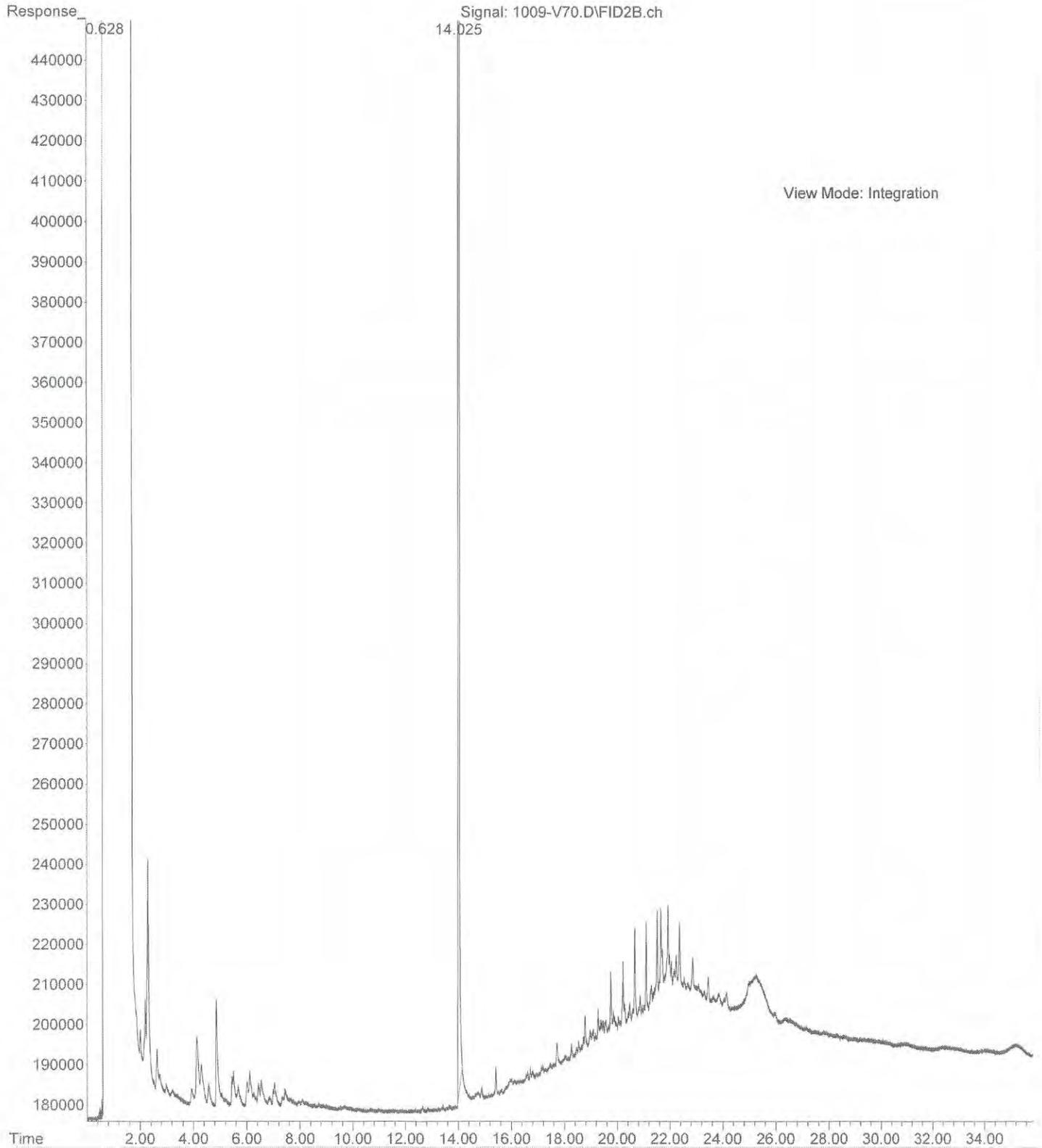
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Sample Name: 10-062-04  
Misc Info :  
Vial Number: 6



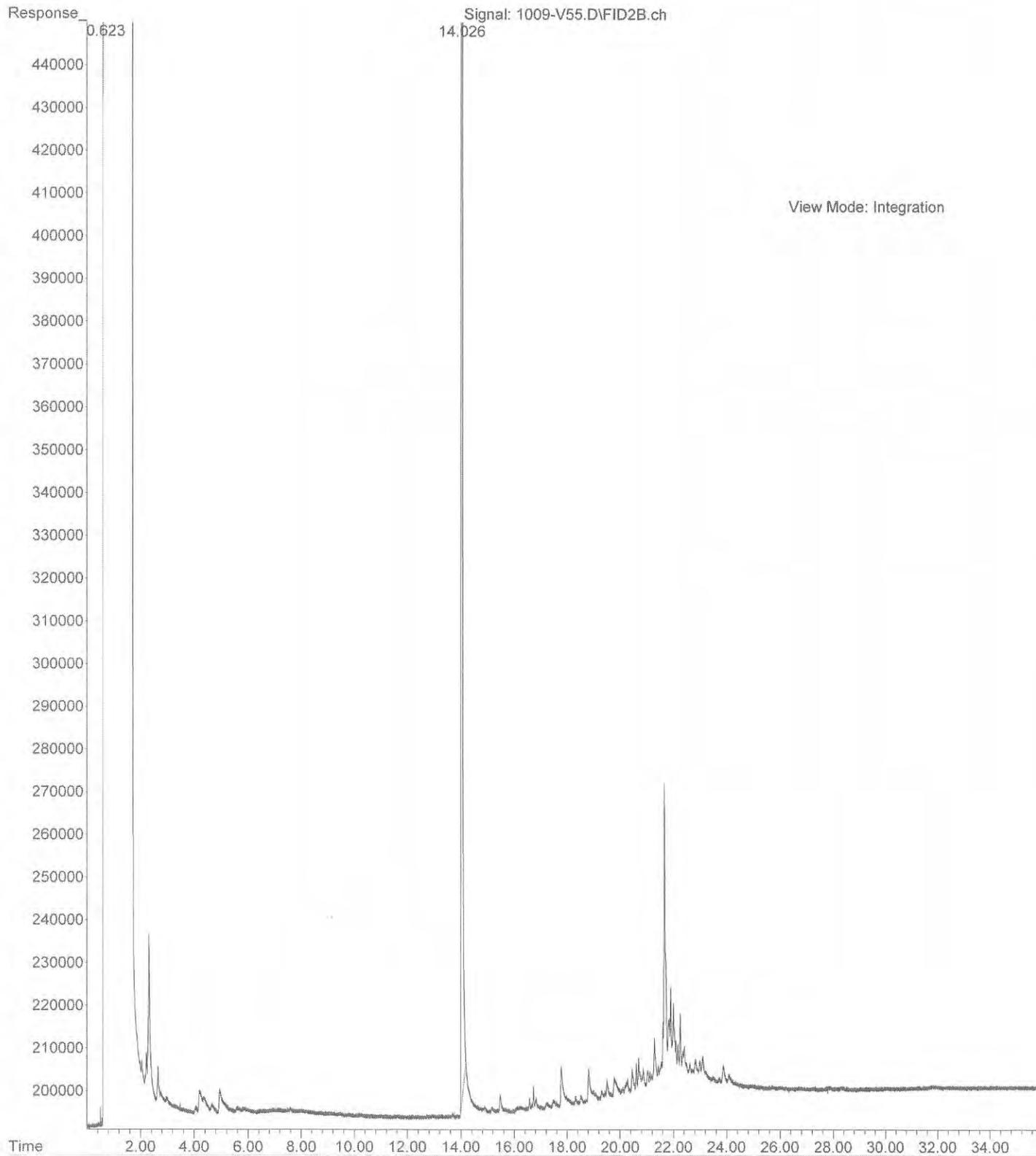
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Sample Name: 10-062-05 ~~DUP~~  
Misc Info :  
Vial Number: 8



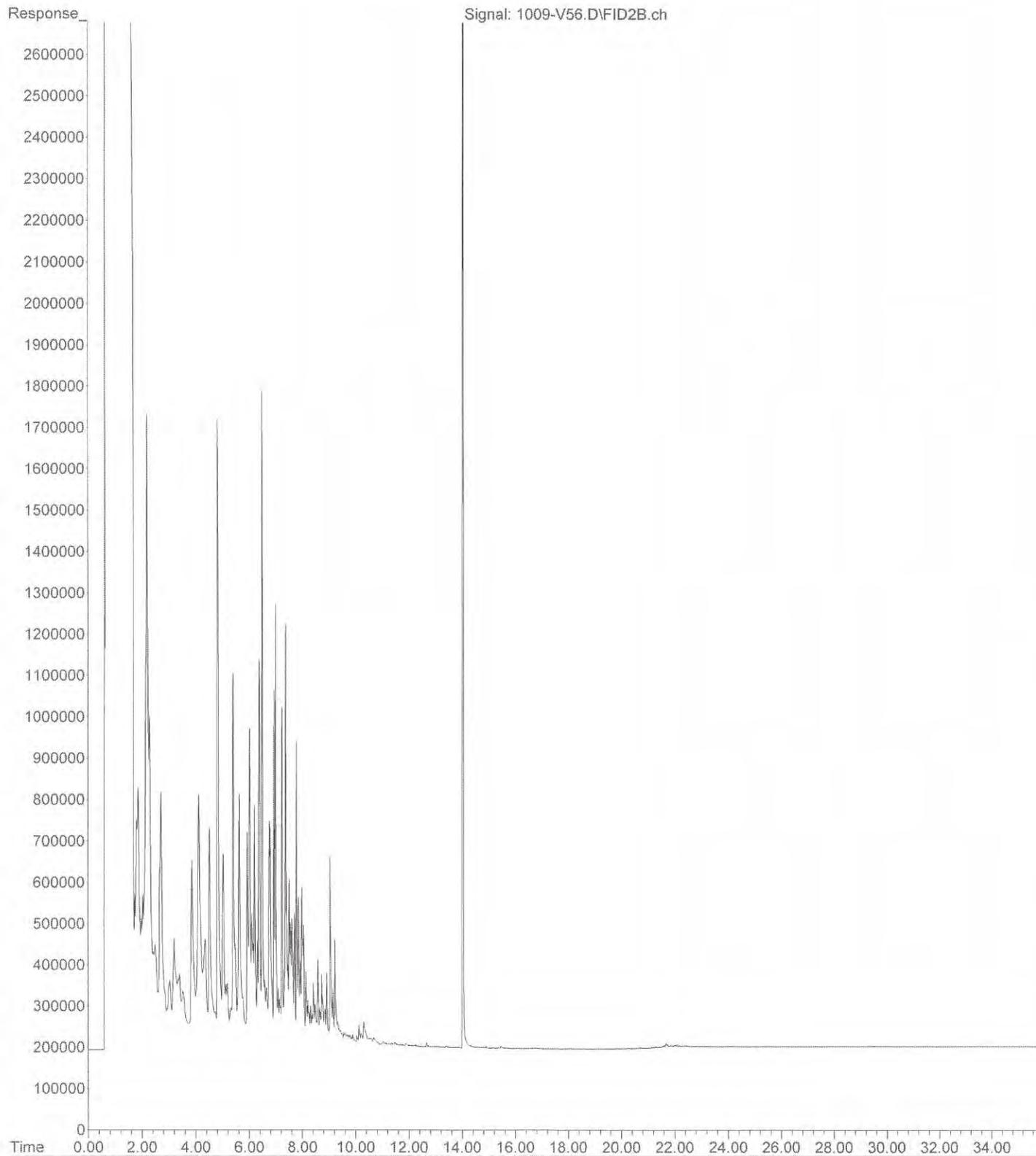
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Sample Name: 10-062-06  
Misc Info :  
Vial Number: 70



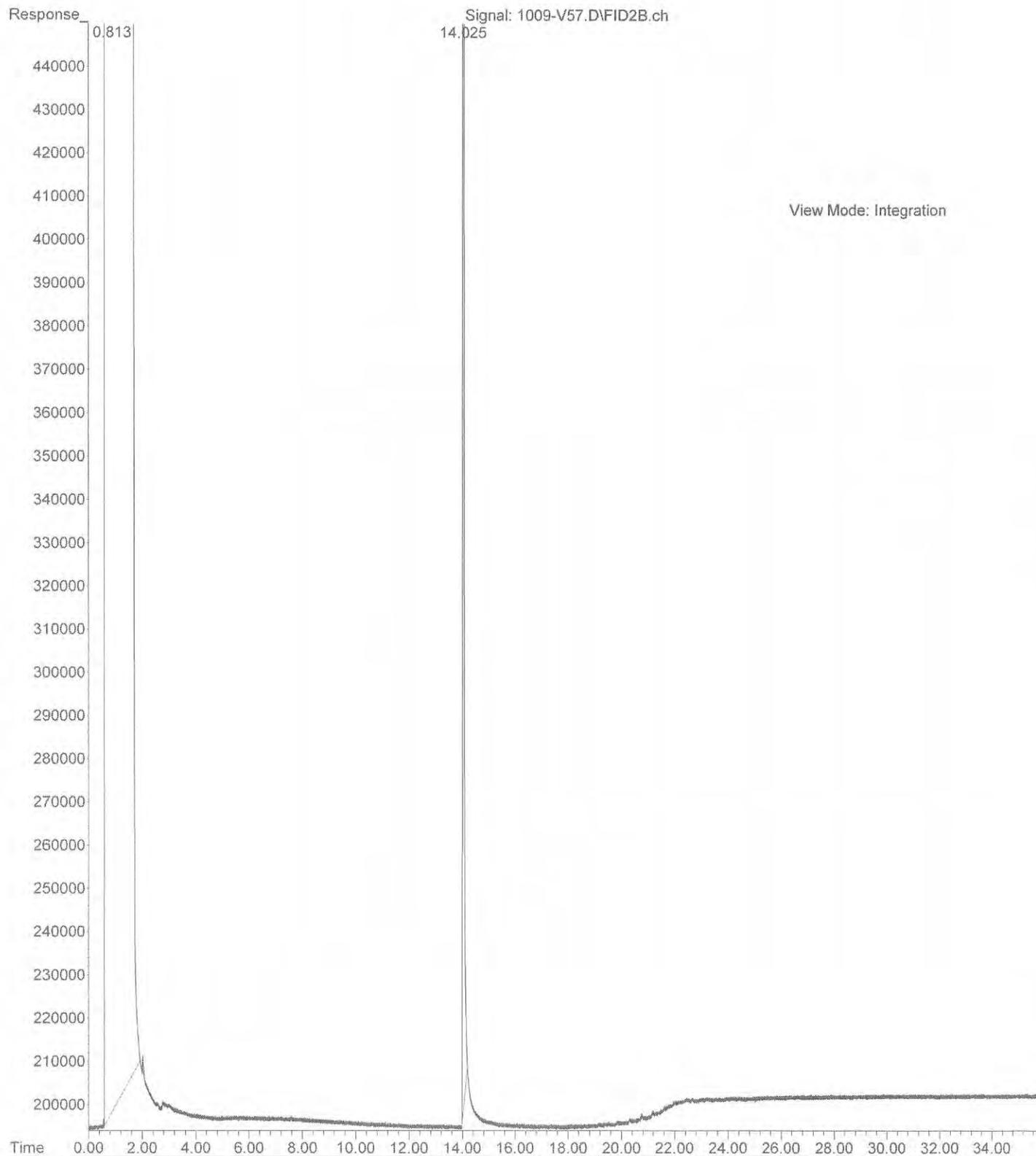
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Sample Name: 10-062-09  
Misc Info :  
Vial Number: 55



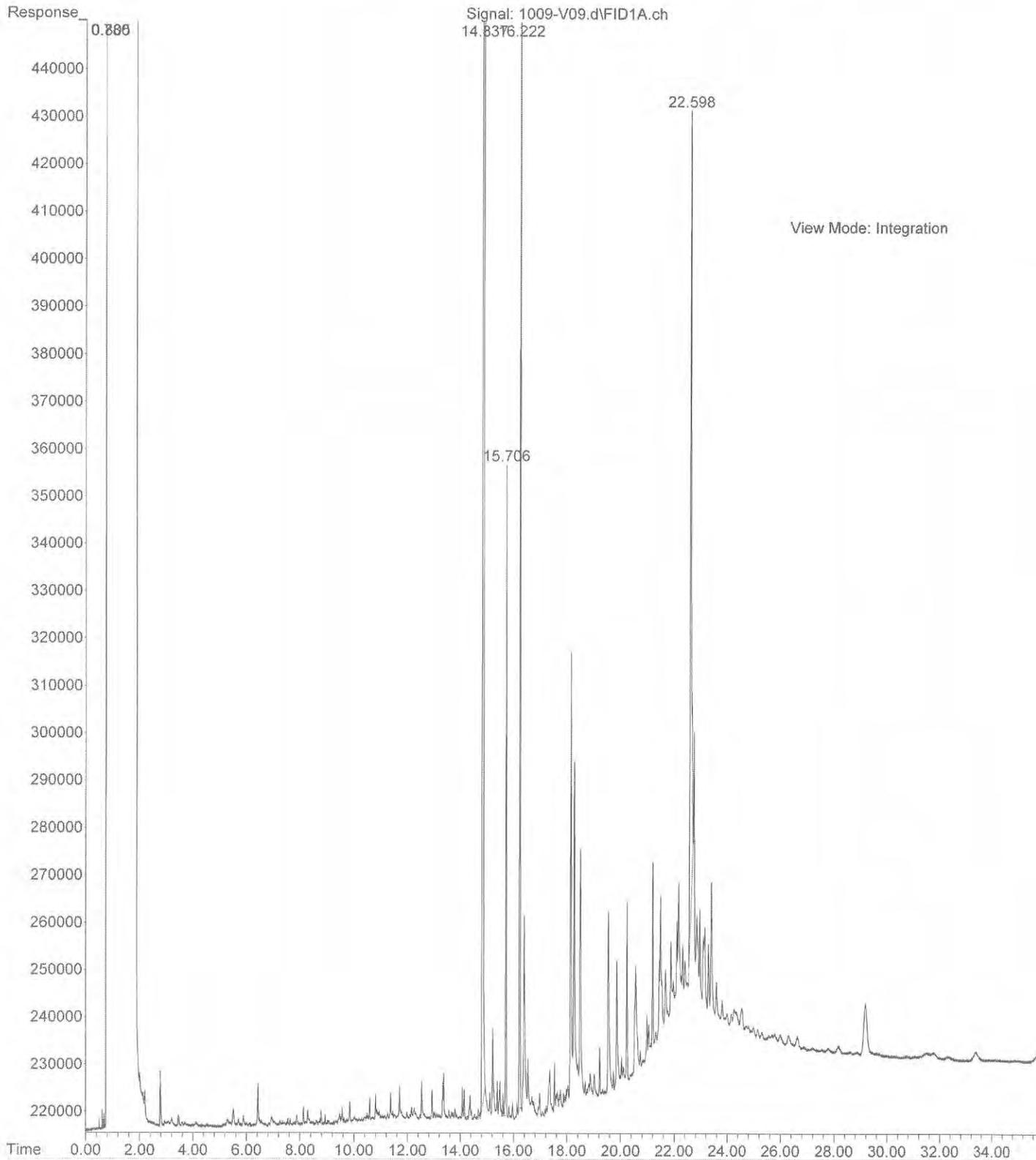
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Sample Name: 10-062-10  
Misc Info :  
Vial Number: 56



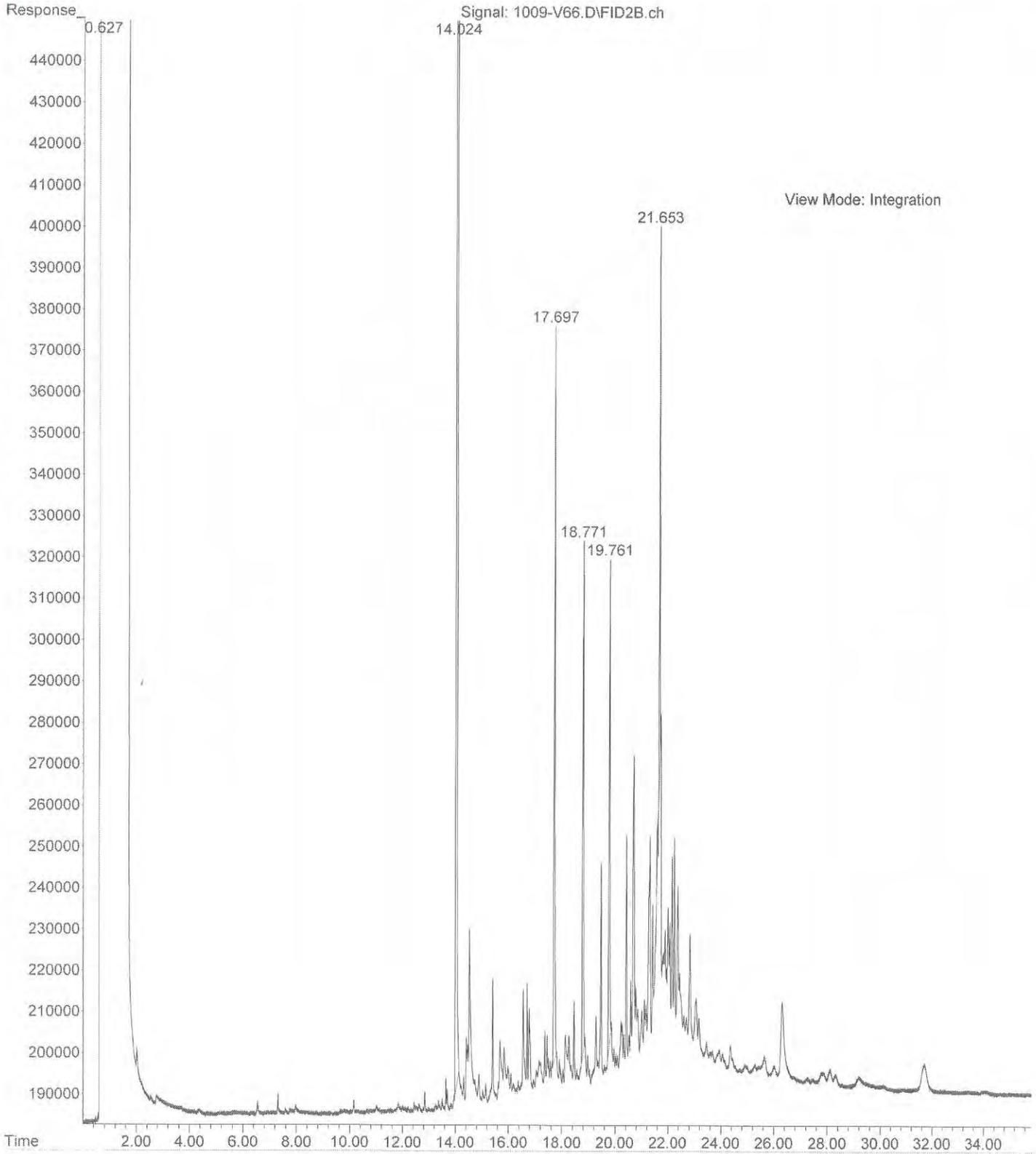
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Sample Name: 10-062-11  
Misc Info :  
Vial Number: 57



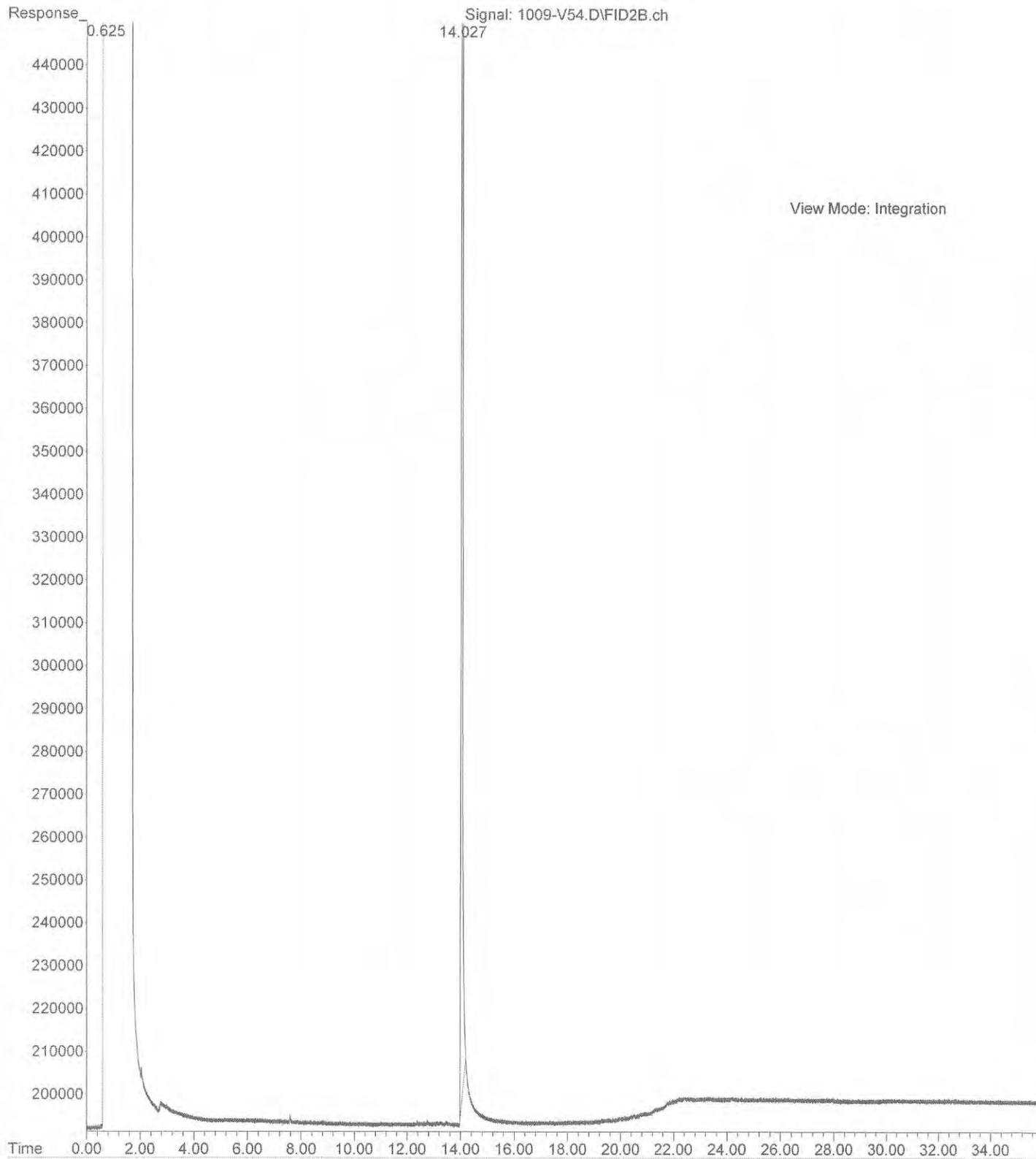
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Sample Name: 10-062-14  
Misc Info :  
Vial Number: 9



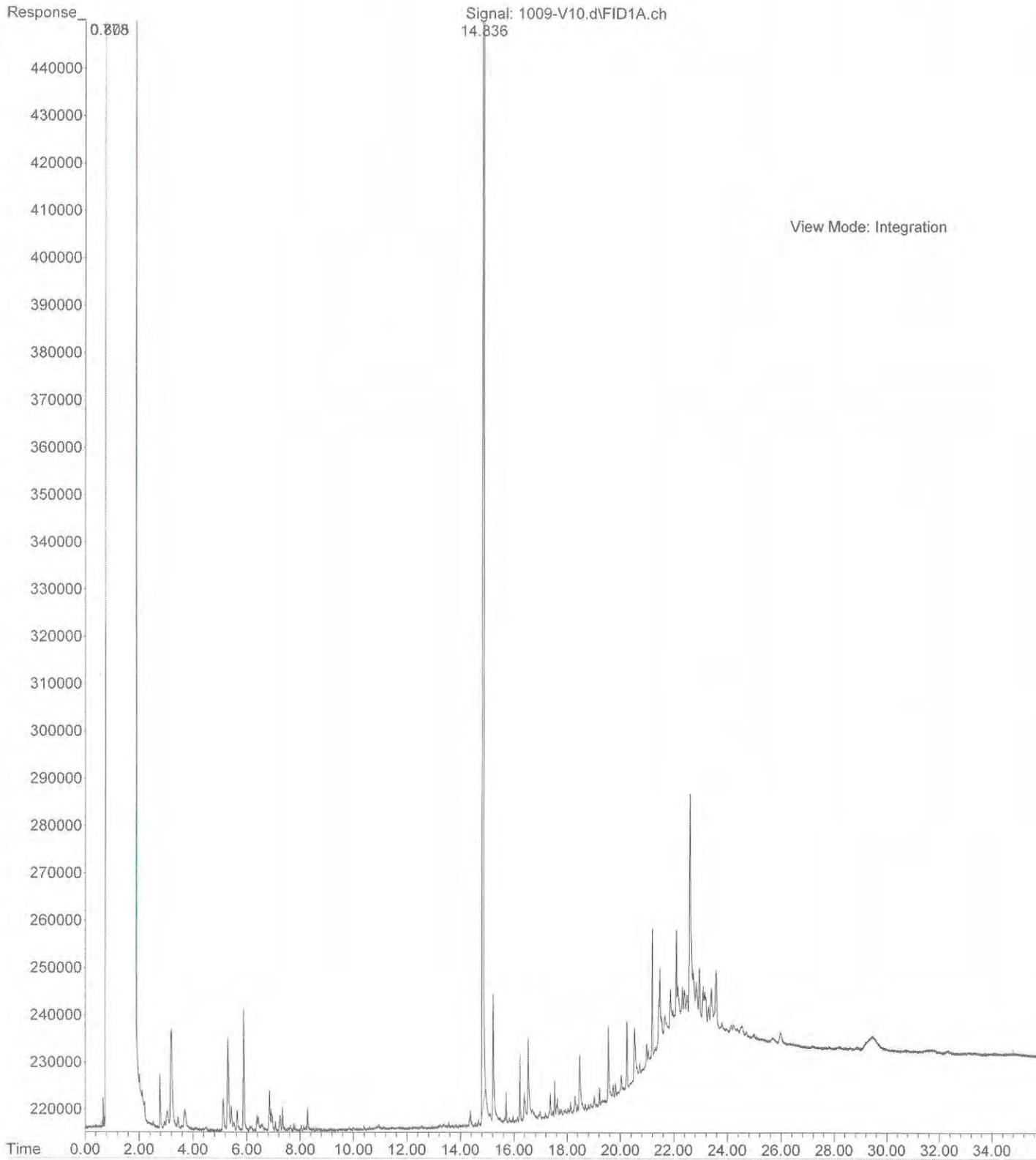
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Sample Name: 10-062-15  
Misc Info :  
Vial Number: 66



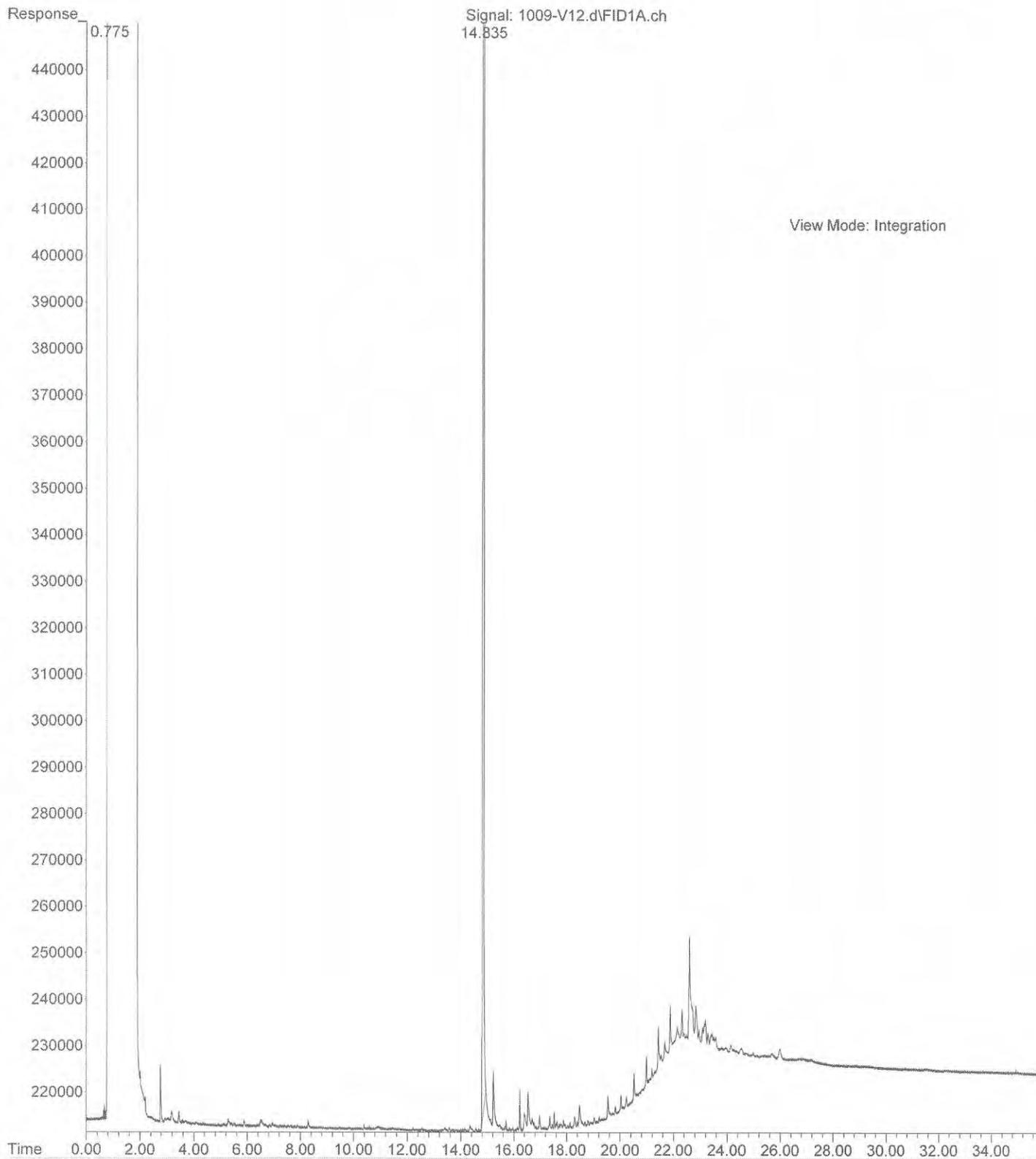
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Sample Name: 10-062-16  
Misc Info :  
Vial Number: 54



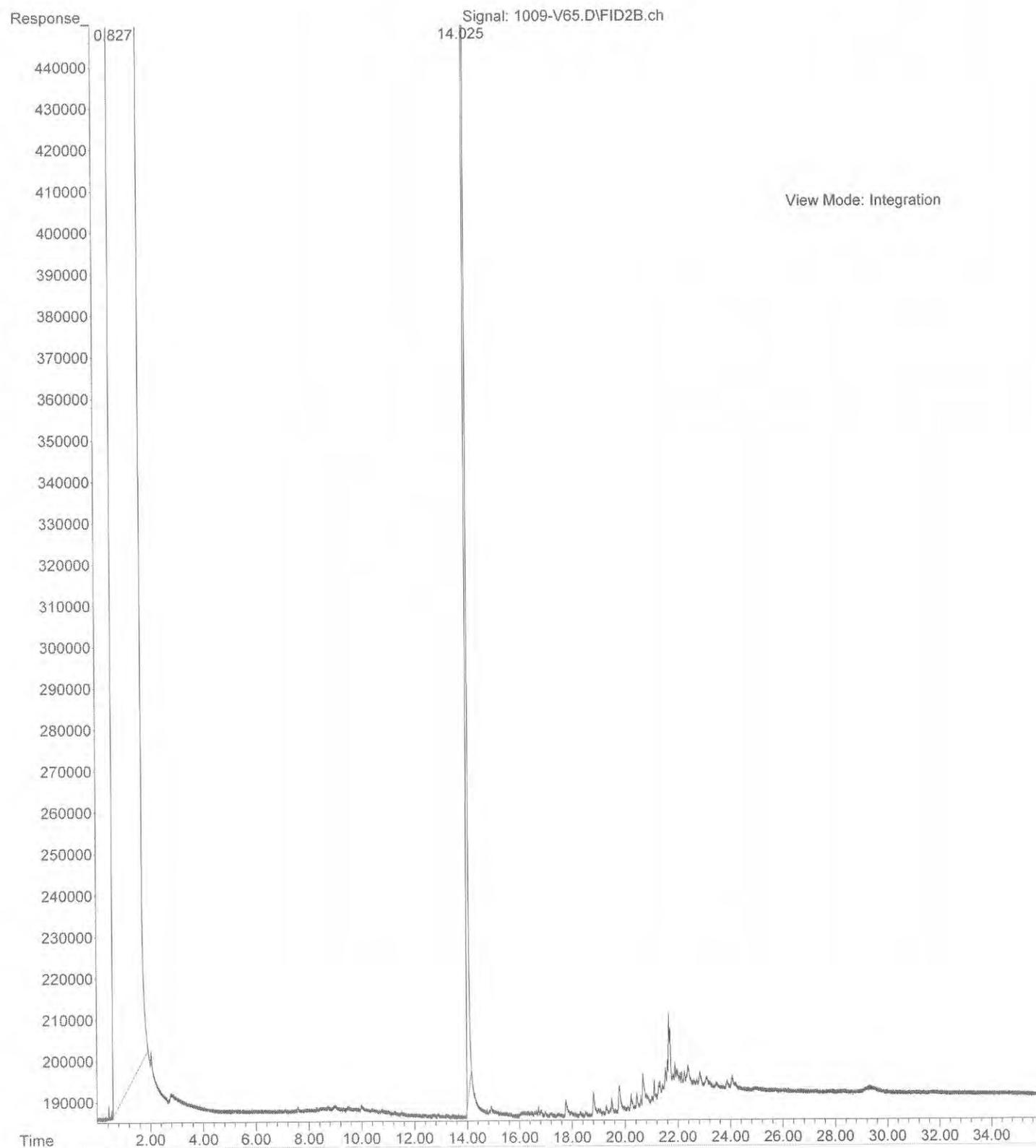
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Instrument : Vigo  
Sample Name: 10-062-19  
Misc Info :  
Vial Number: 10



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Instrument : Vigo  
Sample Name: 10-062-20  
Misc Info :  
Vial Number: 12



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Operator :  
Acquired : 9 Oct 2017 19:36 using AcqMethod V171004F.M  
Instrument : Vigo  
Sample Name: 10-062-21  
Misc Info :  
Vial Number: 65





14648 NE 95<sup>th</sup> Street, Redmond, WA 98052 • (425) 883-3881

October 13, 2017

Marsi Beeson  
GeoEngineers, Inc.  
12000 NW Naito Prkway, Suite 180  
Portland, OR 97209

Re: Analytical Data for Project 4082-039-01  
Laboratory Reference No. 1710-061

Dear Marsi:

Enclosed are the analytical results and associated quality control data for samples submitted on October 5, 2017.

The standard policy of OnSite Environmental, Inc. is to store your samples for 30 days from the date of receipt. If you require longer storage, please contact the laboratory.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning the data, or need additional information, please feel free to call me.

Sincerely,

A handwritten signature in black ink, appearing to read "DB", with a long horizontal stroke extending to the right.

David Baumeister  
Project Manager

Enclosures



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OnSite Environmental, Inc. 14648 NE 95<sup>th</sup> Street, Redmond, WA 98052 (425) 883-3881

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: October 13, 2017  
Samples Submitted: October 5, 2017  
Laboratory Reference: 1710-061  
Project: 4082-039-01

### Case Narrative

Samples were collected on October 4, 2017 and received by the laboratory on October 5, 2017. They were maintained at the laboratory at a temperature of 2°C to 6°C.

Please note that any and all soil sample results are reported on a dry-weight basis, unless otherwise noted below.

General QA/QC issues associated with the analytical data enclosed in this laboratory report will be indicated with a reference to a comment or explanation on the Data Qualifier page. More complex and involved QA/QC issues will be discussed in detail below.

#### PAHs EPA 8270D/SIM Analysis

Sample FL363-B7-171004-W had one surrogate recovery out of control limits. This is within allowance of our standard operating procedure as long as the recovery is above 10%.

Any other QA/QC issues associated with this extraction and analysis will be indicated with a footnote reference and discussed in detail on the Data Qualifier page.



Date of Report: October 13, 2017  
Samples Submitted: October 5, 2017  
Laboratory Reference: 1710-061  
Project: 4082-039-01

### ANALYTICAL REPORT FOR SAMPLES

Client ID	Laboratory ID	Matrix	Date Sampled	Date Received	Notes
FL363-B4-171004-W	10-061-01	Water	10-4-17	10-5-17	
FL363-B5-171004-W	10-061-02	Water	10-4-17	10-5-17	
FL363-B6-171004-W	10-061-03	Water	10-4-17	10-5-17	
FL363-B7-171004-W	10-061-04	Water	10-4-17	10-5-17	



Date of Report: October 13, 2017  
 Samples Submitted: October 5, 2017  
 Laboratory Reference: 1710-061  
 Project: 4082-039-01

**NWTPH-Gx**

Matrix: Water  
 Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>FL363-B4-171004-W</b>					
Laboratory ID:	10-061-01					
Gasoline	<b>24000</b>	5000	NWTPH-Gx	10-9-17	10-9-17	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Fluorobenzene</i>	84	61-118				
<b>Client ID:</b>	<b>FL363-B5-171004-W</b>					
Laboratory ID:	10-061-02					
Gasoline	<b>7200</b>	5000	NWTPH-Gx	10-9-17	10-9-17	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Fluorobenzene</i>	80	61-118				
<b>Client ID:</b>	<b>FL363-B6-171004-W</b>					
Laboratory ID:	10-061-03					
Gasoline	<b>ND</b>	100	NWTPH-Gx	10-6-17	10-6-17	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Fluorobenzene</i>	90	61-118				
<b>Client ID:</b>	<b>FL363-B7-171004-W</b>					
Laboratory ID:	10-061-04					
Gasoline	<b>ND</b>	100	NWTPH-Gx	10-6-17	10-6-17	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Fluorobenzene</i>	88	61-118				



Date of Report: October 13, 2017  
 Samples Submitted: October 5, 2017  
 Laboratory Reference: 1710-061  
 Project: 4082-039-01

### NWTPH-Dx

Matrix: Water  
 Units: mg/L (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>FL363-B4-171004-W</b>					
Laboratory ID:	10-061-01					
Diesel Range Organics	<b>2.3</b>	0.26	NWTPH-Dx	10-11-17	10-12-17	M
Lube Oil Range Organics	<b>0.52</b>	0.42	NWTPH-Dx	10-11-17	10-12-17	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	77	50-150				

<b>Client ID:</b>	<b>FL363-B5-171004-W</b>					
Laboratory ID:	10-061-02					
Diesel Range Organics	<b>1.1</b>	0.26	NWTPH-Dx	10-11-17	10-12-17	M
Lube Oil Range Organics	<b>ND</b>	0.42	NWTPH-Dx	10-11-17	10-12-17	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	97	50-150				

<b>Client ID:</b>	<b>FL363-B6-171004-W</b>					
Laboratory ID:	10-061-03					
Diesel Range Organics	<b>ND</b>	0.31	NWTPH-Dx	10-11-17	10-12-17	U1
Lube Oil Range Organics	<b>0.48</b>	0.43	NWTPH-Dx	10-11-17	10-12-17	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	89	50-150				

<b>Client ID:</b>	<b>FL363-B7-171004-W</b>					
Laboratory ID:	10-061-04					
Diesel Range Organics	<b>ND</b>	0.28	NWTPH-Dx	10-11-17	10-12-17	
Lube Oil Range Organics	<b>ND</b>	0.44	NWTPH-Dx	10-11-17	10-12-17	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	78	50-150				



Date of Report: October 13, 2017  
 Samples Submitted: October 5, 2017  
 Laboratory Reference: 1710-061  
 Project: 4082-039-01

**VOLATILES EPA 8260C**  
 page 1 of 2

Matrix: Water  
 Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>FL363-B4-171004-W</b>					
Laboratory ID:	10-061-01					
Dichlorodifluoromethane	ND	7.4	EPA 8260C	10-9-17	10-9-17	
Chloromethane	ND	20	EPA 8260C	10-9-17	10-9-17	
Vinyl Chloride	ND	4.0	EPA 8260C	10-9-17	10-9-17	
Bromomethane	ND	4.0	EPA 8260C	10-9-17	10-9-17	
Chloroethane	ND	20	EPA 8260C	10-9-17	10-9-17	
Trichlorofluoromethane	ND	4.0	EPA 8260C	10-9-17	10-9-17	
1,1-Dichloroethene	ND	4.0	EPA 8260C	10-9-17	10-9-17	
Acetone	ND	200	EPA 8260C	10-9-17	10-9-17	
Iodomethane	ND	26	EPA 8260C	10-9-17	10-9-17	
Carbon Disulfide	ND	4.0	EPA 8260C	10-9-17	10-9-17	
Methylene Chloride	ND	20	EPA 8260C	10-9-17	10-9-17	
(trans) 1,2-Dichloroethene	ND	4.0	EPA 8260C	10-9-17	10-9-17	
Methyl t-Butyl Ether	ND	4.0	EPA 8260C	10-9-17	10-9-17	
1,1-Dichloroethane	ND	4.0	EPA 8260C	10-9-17	10-9-17	
Vinyl Acetate	ND	20	EPA 8260C	10-9-17	10-9-17	
2,2-Dichloropropane	ND	4.0	EPA 8260C	10-9-17	10-9-17	
(cis) 1,2-Dichloroethene	ND	4.0	EPA 8260C	10-9-17	10-9-17	
2-Butanone	ND	100	EPA 8260C	10-9-17	10-9-17	
Bromochloromethane	ND	4.0	EPA 8260C	10-9-17	10-9-17	
Chloroform	ND	4.0	EPA 8260C	10-9-17	10-9-17	
1,1,1-Trichloroethane	ND	4.0	EPA 8260C	10-9-17	10-9-17	
Carbon Tetrachloride	ND	4.0	EPA 8260C	10-9-17	10-9-17	
1,1-Dichloropropene	ND	4.0	EPA 8260C	10-9-17	10-9-17	
Benzene	ND	4.0	EPA 8260C	10-9-17	10-9-17	
1,2-Dichloroethane	ND	4.0	EPA 8260C	10-9-17	10-9-17	
Trichloroethene	ND	4.0	EPA 8260C	10-9-17	10-9-17	
1,2-Dichloropropane	ND	4.0	EPA 8260C	10-9-17	10-9-17	
Dibromomethane	ND	4.0	EPA 8260C	10-9-17	10-9-17	
Bromodichloromethane	ND	4.0	EPA 8260C	10-9-17	10-9-17	
2-Chloroethyl Vinyl Ether	ND	78	EPA 8260C	10-9-17	10-9-17	
(cis) 1,3-Dichloropropene	ND	4.0	EPA 8260C	10-9-17	10-9-17	
Methyl Isobutyl Ketone	ND	50	EPA 8260C	10-9-17	10-9-17	
Toluene	ND	20	EPA 8260C	10-9-17	10-9-17	
(trans) 1,3-Dichloropropene	ND	4.0	EPA 8260C	10-9-17	10-9-17	



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 Samples Submitted: October 5, 2017  
 Laboratory Reference: 1710-061  
 Project: 4082-039-01

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>FL363-B4-171004-W</b>					
Laboratory ID:	10-061-01					
1,1,2-Trichloroethane	ND	4.0	EPA 8260C	10-9-17	10-9-17	
Tetrachloroethene	ND	4.0	EPA 8260C	10-9-17	10-9-17	
1,3-Dichloropropane	ND	4.0	EPA 8260C	10-9-17	10-9-17	
2-Hexanone	ND	40	EPA 8260C	10-9-17	10-9-17	
Dibromochloromethane	ND	4.0	EPA 8260C	10-9-17	10-9-17	
1,2-Dibromoethane	ND	4.0	EPA 8260C	10-9-17	10-9-17	
Chlorobenzene	ND	4.0	EPA 8260C	10-9-17	10-9-17	
1,1,1,2-Tetrachloroethane	ND	4.0	EPA 8260C	10-9-17	10-9-17	
Ethylbenzene	430	4.0	EPA 8260C	10-9-17	10-9-17	
m,p-Xylene	2000	20	EPA 8260C	10-10-17	10-10-17	
o-Xylene	800	4.0	EPA 8260C	10-9-17	10-9-17	
Styrene	ND	4.0	EPA 8260C	10-9-17	10-9-17	
Bromoform	ND	20	EPA 8260C	10-9-17	10-9-17	
Isopropylbenzene	33	4.0	EPA 8260C	10-9-17	10-9-17	
Bromobenzene	ND	4.0	EPA 8260C	10-9-17	10-9-17	
1,1,2,2-Tetrachloroethane	ND	5.0	EPA 8260C	10-9-17	10-9-17	
1,2,3-Trichloropropane	ND	4.0	EPA 8260C	10-9-17	10-9-17	
n-Propylbenzene	120	4.0	EPA 8260C	10-9-17	10-9-17	
2-Chlorotoluene	ND	4.0	EPA 8260C	10-9-17	10-9-17	
4-Chlorotoluene	ND	4.0	EPA 8260C	10-9-17	10-9-17	
1,3,5-Trimethylbenzene	230	4.0	EPA 8260C	10-9-17	10-9-17	
tert-Butylbenzene	ND	4.0	EPA 8260C	10-9-17	10-9-17	
1,2,4-Trimethylbenzene	860	4.0	EPA 8260C	10-9-17	10-9-17	
sec-Butylbenzene	9.4	4.0	EPA 8260C	10-9-17	10-9-17	
1,3-Dichlorobenzene	ND	4.0	EPA 8260C	10-9-17	10-9-17	
p-Isopropyltoluene	ND	4.0	EPA 8260C	10-9-17	10-9-17	
1,4-Dichlorobenzene	ND	4.0	EPA 8260C	10-9-17	10-9-17	
1,2-Dichlorobenzene	ND	4.0	EPA 8260C	10-9-17	10-9-17	
n-Butylbenzene	33	4.0	EPA 8260C	10-9-17	10-9-17	
1,2-Dibromo-3-chloropropane	ND	20	EPA 8260C	10-9-17	10-9-17	
1,2,4-Trichlorobenzene	ND	4.0	EPA 8260C	10-9-17	10-9-17	
Hexachlorobutadiene	ND	4.0	EPA 8260C	10-9-17	10-9-17	
Naphthalene	160	28	EPA 8260C	10-9-17	10-9-17	Y
1,2,3-Trichlorobenzene	ND	4.0	EPA 8260C	10-9-17	10-9-17	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>94</i>	<i>77-129</i>				
<i>Toluene-d8</i>	<i>95</i>	<i>80-127</i>				
<i>4-Bromofluorobenzene</i>	<i>100</i>	<i>78-125</i>				



Date of Report: October 13, 2017  
 Samples Submitted: October 5, 2017  
 Laboratory Reference: 1710-061  
 Project: 4082-039-01

**VOLATILES EPA 8260C**  
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Matrix: Water  
 Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>FL363-B5-171004-W</b>					
Laboratory ID:	10-061-02					
Dichlorodifluoromethane	ND	7.4	EPA 8260C	10-9-17	10-9-17	
Chloromethane	ND	20	EPA 8260C	10-9-17	10-9-17	
Vinyl Chloride	ND	4.0	EPA 8260C	10-9-17	10-9-17	
Bromomethane	ND	4.0	EPA 8260C	10-9-17	10-9-17	
Chloroethane	ND	20	EPA 8260C	10-9-17	10-9-17	
Trichlorofluoromethane	ND	4.0	EPA 8260C	10-9-17	10-9-17	
1,1-Dichloroethene	ND	4.0	EPA 8260C	10-9-17	10-9-17	
Acetone	ND	200	EPA 8260C	10-9-17	10-9-17	
Iodomethane	ND	26	EPA 8260C	10-9-17	10-9-17	
Carbon Disulfide	ND	4.0	EPA 8260C	10-9-17	10-9-17	
Methylene Chloride	ND	20	EPA 8260C	10-9-17	10-9-17	
(trans) 1,2-Dichloroethene	ND	4.0	EPA 8260C	10-9-17	10-9-17	
Methyl t-Butyl Ether	ND	4.0	EPA 8260C	10-9-17	10-9-17	
1,1-Dichloroethane	ND	4.0	EPA 8260C	10-9-17	10-9-17	
Vinyl Acetate	ND	20	EPA 8260C	10-9-17	10-9-17	
2,2-Dichloropropane	ND	4.0	EPA 8260C	10-9-17	10-9-17	
(cis) 1,2-Dichloroethene	ND	4.0	EPA 8260C	10-9-17	10-9-17	
2-Butanone	ND	100	EPA 8260C	10-9-17	10-9-17	
Bromochloromethane	ND	4.0	EPA 8260C	10-9-17	10-9-17	
Chloroform	ND	4.0	EPA 8260C	10-9-17	10-9-17	
1,1,1-Trichloroethane	ND	4.0	EPA 8260C	10-9-17	10-9-17	
Carbon Tetrachloride	ND	4.0	EPA 8260C	10-9-17	10-9-17	
1,1-Dichloropropene	ND	4.0	EPA 8260C	10-9-17	10-9-17	
Benzene	510	4.0	EPA 8260C	10-9-17	10-9-17	
1,2-Dichloroethane	ND	4.0	EPA 8260C	10-9-17	10-9-17	
Trichloroethene	ND	4.0	EPA 8260C	10-9-17	10-9-17	
1,2-Dichloropropane	ND	4.0	EPA 8260C	10-9-17	10-9-17	
Dibromomethane	ND	4.0	EPA 8260C	10-9-17	10-9-17	
Bromodichloromethane	ND	4.0	EPA 8260C	10-9-17	10-9-17	
2-Chloroethyl Vinyl Ether	ND	78	EPA 8260C	10-9-17	10-9-17	
(cis) 1,3-Dichloropropene	ND	4.0	EPA 8260C	10-9-17	10-9-17	
Methyl Isobutyl Ketone	ND	50	EPA 8260C	10-9-17	10-9-17	
Toluene	62	20	EPA 8260C	10-9-17	10-9-17	
(trans) 1,3-Dichloropropene	ND	4.0	EPA 8260C	10-9-17	10-9-17	



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 Project: 4082-039-01

**VOLATILES EPA 8260C**  
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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>FL363-B5-171004-W</b>					
Laboratory ID:	10-061-02					
1,1,2-Trichloroethane	ND	4.0	EPA 8260C	10-9-17	10-9-17	
Tetrachloroethene	ND	4.0	EPA 8260C	10-9-17	10-9-17	
1,3-Dichloropropane	ND	4.0	EPA 8260C	10-9-17	10-9-17	
2-Hexanone	ND	40	EPA 8260C	10-9-17	10-9-17	
Dibromochloromethane	ND	4.0	EPA 8260C	10-9-17	10-9-17	
1,2-Dibromoethane	ND	4.0	EPA 8260C	10-9-17	10-9-17	
Chlorobenzene	ND	4.0	EPA 8260C	10-9-17	10-9-17	
1,1,1,2-Tetrachloroethane	ND	4.0	EPA 8260C	10-9-17	10-9-17	
Ethylbenzene	340	4.0	EPA 8260C	10-9-17	10-9-17	
m,p-Xylene	400	8.0	EPA 8260C	10-9-17	10-9-17	
o-Xylene	26	4.0	EPA 8260C	10-9-17	10-9-17	
Styrene	ND	4.0	EPA 8260C	10-9-17	10-9-17	
Bromoform	ND	20	EPA 8260C	10-9-17	10-9-17	
Isopropylbenzene	29	4.0	EPA 8260C	10-9-17	10-9-17	
Bromobenzene	ND	4.0	EPA 8260C	10-9-17	10-9-17	
1,1,2,2-Tetrachloroethane	ND	5.0	EPA 8260C	10-9-17	10-9-17	
1,2,3-Trichloropropane	ND	4.0	EPA 8260C	10-9-17	10-9-17	
n-Propylbenzene	78	4.0	EPA 8260C	10-9-17	10-9-17	
2-Chlorotoluene	ND	4.0	EPA 8260C	10-9-17	10-9-17	
4-Chlorotoluene	ND	4.0	EPA 8260C	10-9-17	10-9-17	
1,3,5-Trimethylbenzene	41	4.0	EPA 8260C	10-9-17	10-9-17	
tert-Butylbenzene	ND	4.0	EPA 8260C	10-9-17	10-9-17	
1,2,4-Trimethylbenzene	180	4.0	EPA 8260C	10-9-17	10-9-17	
sec-Butylbenzene	6.4	4.0	EPA 8260C	10-9-17	10-9-17	
1,3-Dichlorobenzene	ND	4.0	EPA 8260C	10-9-17	10-9-17	
p-Isopropyltoluene	ND	4.0	EPA 8260C	10-9-17	10-9-17	
1,4-Dichlorobenzene	ND	4.0	EPA 8260C	10-9-17	10-9-17	
1,2-Dichlorobenzene	ND	4.0	EPA 8260C	10-9-17	10-9-17	
n-Butylbenzene	14	4.0	EPA 8260C	10-9-17	10-9-17	
1,2-Dibromo-3-chloropropane	ND	20	EPA 8260C	10-9-17	10-9-17	
1,2,4-Trichlorobenzene	ND	4.0	EPA 8260C	10-9-17	10-9-17	
Hexachlorobutadiene	ND	4.0	EPA 8260C	10-9-17	10-9-17	
Naphthalene	ND	28	EPA 8260C	10-9-17	10-9-17	
1,2,3-Trichlorobenzene	ND	4.0	EPA 8260C	10-9-17	10-9-17	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>96</i>	<i>77-129</i>				
<i>Toluene-d8</i>	<i>96</i>	<i>80-127</i>				
<i>4-Bromofluorobenzene</i>	<i>101</i>	<i>78-125</i>				



Date of Report: October 13, 2017  
 Samples Submitted: October 5, 2017  
 Laboratory Reference: 1710-061  
 Project: 4082-039-01

**VOLATILES EPA 8260C**  
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Matrix: Water  
 Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>FL363-B6-171004-W</b>					
Laboratory ID:	10-061-03					
Dichlorodifluoromethane	ND	0.37	EPA 8260C	10-9-17	10-9-17	
Chloromethane	ND	1.0	EPA 8260C	10-9-17	10-9-17	
Vinyl Chloride	ND	0.20	EPA 8260C	10-9-17	10-9-17	
Bromomethane	ND	0.20	EPA 8260C	10-9-17	10-9-17	
Chloroethane	ND	1.0	EPA 8260C	10-9-17	10-9-17	
Trichlorofluoromethane	ND	0.20	EPA 8260C	10-9-17	10-9-17	
1,1-Dichloroethene	ND	0.20	EPA 8260C	10-9-17	10-9-17	
Acetone	ND	10	EPA 8260C	10-9-17	10-9-17	
Iodomethane	ND	1.3	EPA 8260C	10-9-17	10-9-17	
Carbon Disulfide	ND	0.20	EPA 8260C	10-9-17	10-9-17	
Methylene Chloride	ND	1.0	EPA 8260C	10-9-17	10-9-17	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260C	10-9-17	10-9-17	
Methyl t-Butyl Ether	ND	0.20	EPA 8260C	10-9-17	10-9-17	
1,1-Dichloroethane	ND	0.20	EPA 8260C	10-9-17	10-9-17	
Vinyl Acetate	ND	1.0	EPA 8260C	10-9-17	10-9-17	
2,2-Dichloropropane	ND	0.20	EPA 8260C	10-9-17	10-9-17	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260C	10-9-17	10-9-17	
2-Butanone	ND	5.0	EPA 8260C	10-9-17	10-9-17	
Bromochloromethane	ND	0.20	EPA 8260C	10-9-17	10-9-17	
Chloroform	ND	0.20	EPA 8260C	10-9-17	10-9-17	
1,1,1-Trichloroethane	ND	0.20	EPA 8260C	10-9-17	10-9-17	
Carbon Tetrachloride	ND	0.20	EPA 8260C	10-9-17	10-9-17	
1,1-Dichloropropene	ND	0.20	EPA 8260C	10-9-17	10-9-17	
Benzene	ND	0.20	EPA 8260C	10-9-17	10-9-17	
1,2-Dichloroethane	ND	0.20	EPA 8260C	10-9-17	10-9-17	
Trichloroethene	ND	0.20	EPA 8260C	10-9-17	10-9-17	
1,2-Dichloropropane	ND	0.20	EPA 8260C	10-9-17	10-9-17	
Dibromomethane	ND	0.20	EPA 8260C	10-9-17	10-9-17	
Bromodichloromethane	ND	0.20	EPA 8260C	10-9-17	10-9-17	
2-Chloroethyl Vinyl Ether	ND	3.9	EPA 8260C	10-9-17	10-9-17	
(cis) 1,3-Dichloropropene	ND	0.20	EPA 8260C	10-9-17	10-9-17	
Methyl Isobutyl Ketone	ND	2.5	EPA 8260C	10-9-17	10-9-17	
Toluene	ND	1.0	EPA 8260C	10-9-17	10-9-17	
(trans) 1,3-Dichloropropene	ND	0.20	EPA 8260C	10-9-17	10-9-17	



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 Project: 4082-039-01

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>FL363-B6-171004-W</b>					
Laboratory ID:	10-061-03					
1,1,2-Trichloroethane	ND	0.20	EPA 8260C	10-9-17	10-9-17	
Tetrachloroethene	ND	0.20	EPA 8260C	10-9-17	10-9-17	
1,3-Dichloropropane	ND	0.20	EPA 8260C	10-9-17	10-9-17	
2-Hexanone	ND	2.0	EPA 8260C	10-9-17	10-9-17	
Dibromochloromethane	ND	0.20	EPA 8260C	10-9-17	10-9-17	
1,2-Dibromoethane	ND	0.20	EPA 8260C	10-9-17	10-9-17	
Chlorobenzene	ND	0.20	EPA 8260C	10-9-17	10-9-17	
1,1,1,2-Tetrachloroethane	ND	0.20	EPA 8260C	10-9-17	10-9-17	
Ethylbenzene	ND	0.20	EPA 8260C	10-9-17	10-9-17	
m,p-Xylene	ND	0.40	EPA 8260C	10-9-17	10-9-17	
o-Xylene	ND	0.20	EPA 8260C	10-9-17	10-9-17	
Styrene	ND	0.20	EPA 8260C	10-9-17	10-9-17	
Bromoform	ND	1.0	EPA 8260C	10-9-17	10-9-17	
Isopropylbenzene	ND	0.20	EPA 8260C	10-9-17	10-9-17	
Bromobenzene	ND	0.20	EPA 8260C	10-9-17	10-9-17	
1,1,2,2-Tetrachloroethane	ND	0.25	EPA 8260C	10-9-17	10-9-17	
1,2,3-Trichloropropane	ND	0.20	EPA 8260C	10-9-17	10-9-17	
n-Propylbenzene	ND	0.20	EPA 8260C	10-9-17	10-9-17	
2-Chlorotoluene	ND	0.20	EPA 8260C	10-9-17	10-9-17	
4-Chlorotoluene	ND	0.20	EPA 8260C	10-9-17	10-9-17	
1,3,5-Trimethylbenzene	ND	0.20	EPA 8260C	10-9-17	10-9-17	
tert-Butylbenzene	ND	0.20	EPA 8260C	10-9-17	10-9-17	
1,2,4-Trimethylbenzene	ND	0.20	EPA 8260C	10-9-17	10-9-17	
sec-Butylbenzene	ND	0.20	EPA 8260C	10-9-17	10-9-17	
1,3-Dichlorobenzene	0.31	0.20	EPA 8260C	10-9-17	10-9-17	
p-Isopropyltoluene	ND	0.20	EPA 8260C	10-9-17	10-9-17	
1,4-Dichlorobenzene	ND	0.20	EPA 8260C	10-9-17	10-9-17	
1,2-Dichlorobenzene	ND	0.20	EPA 8260C	10-9-17	10-9-17	
n-Butylbenzene	ND	0.20	EPA 8260C	10-9-17	10-9-17	
1,2-Dibromo-3-chloropropane	ND	1.0	EPA 8260C	10-9-17	10-9-17	
1,2,4-Trichlorobenzene	ND	0.20	EPA 8260C	10-9-17	10-9-17	
Hexachlorobutadiene	ND	0.20	EPA 8260C	10-9-17	10-9-17	
Naphthalene	ND	1.4	EPA 8260C	10-9-17	10-9-17	
1,2,3-Trichlorobenzene	ND	0.20	EPA 8260C	10-9-17	10-9-17	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>94</i>	<i>77-129</i>				
<i>Toluene-d8</i>	<i>96</i>	<i>80-127</i>				
<i>4-Bromofluorobenzene</i>	<i>99</i>	<i>78-125</i>				



Date of Report: October 13, 2017  
 Samples Submitted: October 5, 2017  
 Laboratory Reference: 1710-061  
 Project: 4082-039-01

**VOLATILES EPA 8260C**  
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Matrix: Water  
 Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>FL363-B7-171004-W</b>					
Laboratory ID:	10-061-04					
Dichlorodifluoromethane	ND	0.37	EPA 8260C	10-9-17	10-9-17	
Chloromethane	ND	1.0	EPA 8260C	10-9-17	10-9-17	
Vinyl Chloride	ND	0.20	EPA 8260C	10-9-17	10-9-17	
Bromomethane	ND	0.20	EPA 8260C	10-9-17	10-9-17	
Chloroethane	ND	1.0	EPA 8260C	10-9-17	10-9-17	
Trichlorofluoromethane	ND	0.20	EPA 8260C	10-9-17	10-9-17	
1,1-Dichloroethene	ND	0.20	EPA 8260C	10-9-17	10-9-17	
Acetone	ND	10	EPA 8260C	10-9-17	10-9-17	
Iodomethane	ND	1.3	EPA 8260C	10-9-17	10-9-17	
Carbon Disulfide	ND	0.20	EPA 8260C	10-9-17	10-9-17	
Methylene Chloride	ND	1.0	EPA 8260C	10-9-17	10-9-17	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260C	10-9-17	10-9-17	
Methyl t-Butyl Ether	ND	0.20	EPA 8260C	10-9-17	10-9-17	
1,1-Dichloroethane	ND	0.20	EPA 8260C	10-9-17	10-9-17	
Vinyl Acetate	ND	1.0	EPA 8260C	10-9-17	10-9-17	
2,2-Dichloropropane	ND	0.20	EPA 8260C	10-9-17	10-9-17	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260C	10-9-17	10-9-17	
2-Butanone	ND	5.0	EPA 8260C	10-9-17	10-9-17	
Bromochloromethane	ND	0.20	EPA 8260C	10-9-17	10-9-17	
Chloroform	ND	0.20	EPA 8260C	10-9-17	10-9-17	
1,1,1-Trichloroethane	ND	0.20	EPA 8260C	10-9-17	10-9-17	
Carbon Tetrachloride	ND	0.20	EPA 8260C	10-9-17	10-9-17	
1,1-Dichloropropene	ND	0.20	EPA 8260C	10-9-17	10-9-17	
Benzene	ND	0.20	EPA 8260C	10-9-17	10-9-17	
1,2-Dichloroethane	ND	0.20	EPA 8260C	10-9-17	10-9-17	
Trichloroethene	ND	0.20	EPA 8260C	10-9-17	10-9-17	
1,2-Dichloropropane	ND	0.20	EPA 8260C	10-9-17	10-9-17	
Dibromomethane	ND	0.20	EPA 8260C	10-9-17	10-9-17	
Bromodichloromethane	ND	0.20	EPA 8260C	10-9-17	10-9-17	
2-Chloroethyl Vinyl Ether	ND	3.9	EPA 8260C	10-9-17	10-9-17	
(cis) 1,3-Dichloropropene	ND	0.20	EPA 8260C	10-9-17	10-9-17	
Methyl Isobutyl Ketone	ND	2.5	EPA 8260C	10-9-17	10-9-17	
Toluene	ND	1.0	EPA 8260C	10-9-17	10-9-17	
(trans) 1,3-Dichloropropene	ND	0.20	EPA 8260C	10-9-17	10-9-17	



Date of Report: October 13, 2017  
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 Laboratory Reference: 1710-061  
 Project: 4082-039-01

**VOLATILES EPA 8260C**  
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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>FL363-B7-171004-W</b>					
Laboratory ID:	10-061-04					
1,1,2-Trichloroethane	ND	0.20	EPA 8260C	10-9-17	10-9-17	
Tetrachloroethene	ND	0.20	EPA 8260C	10-9-17	10-9-17	
1,3-Dichloropropane	ND	0.20	EPA 8260C	10-9-17	10-9-17	
2-Hexanone	ND	2.0	EPA 8260C	10-9-17	10-9-17	
Dibromochloromethane	ND	0.20	EPA 8260C	10-9-17	10-9-17	
1,2-Dibromoethane	ND	0.20	EPA 8260C	10-9-17	10-9-17	
Chlorobenzene	ND	0.20	EPA 8260C	10-9-17	10-9-17	
1,1,1,2-Tetrachloroethane	ND	0.20	EPA 8260C	10-9-17	10-9-17	
Ethylbenzene	ND	0.20	EPA 8260C	10-9-17	10-9-17	
m,p-Xylene	ND	0.40	EPA 8260C	10-9-17	10-9-17	
o-Xylene	ND	0.20	EPA 8260C	10-9-17	10-9-17	
Styrene	ND	0.20	EPA 8260C	10-9-17	10-9-17	
Bromoform	ND	1.0	EPA 8260C	10-9-17	10-9-17	
Isopropylbenzene	ND	0.20	EPA 8260C	10-9-17	10-9-17	
Bromobenzene	ND	0.20	EPA 8260C	10-9-17	10-9-17	
1,1,2,2-Tetrachloroethane	ND	0.25	EPA 8260C	10-9-17	10-9-17	
1,2,3-Trichloropropane	ND	0.20	EPA 8260C	10-9-17	10-9-17	
n-Propylbenzene	ND	0.20	EPA 8260C	10-9-17	10-9-17	
2-Chlorotoluene	ND	0.20	EPA 8260C	10-9-17	10-9-17	
4-Chlorotoluene	ND	0.20	EPA 8260C	10-9-17	10-9-17	
1,3,5-Trimethylbenzene	ND	0.20	EPA 8260C	10-9-17	10-9-17	
tert-Butylbenzene	ND	0.20	EPA 8260C	10-9-17	10-9-17	
1,2,4-Trimethylbenzene	ND	0.20	EPA 8260C	10-9-17	10-9-17	
sec-Butylbenzene	ND	0.20	EPA 8260C	10-9-17	10-9-17	
1,3-Dichlorobenzene	ND	0.20	EPA 8260C	10-9-17	10-9-17	
p-Isopropyltoluene	ND	0.20	EPA 8260C	10-9-17	10-9-17	
1,4-Dichlorobenzene	ND	0.20	EPA 8260C	10-9-17	10-9-17	
1,2-Dichlorobenzene	ND	0.20	EPA 8260C	10-9-17	10-9-17	
n-Butylbenzene	ND	0.20	EPA 8260C	10-9-17	10-9-17	
1,2-Dibromo-3-chloropropane	ND	1.0	EPA 8260C	10-9-17	10-9-17	
1,2,4-Trichlorobenzene	ND	0.20	EPA 8260C	10-9-17	10-9-17	
Hexachlorobutadiene	ND	0.20	EPA 8260C	10-9-17	10-9-17	
Naphthalene	ND	1.4	EPA 8260C	10-9-17	10-9-17	
1,2,3-Trichlorobenzene	ND	0.20	EPA 8260C	10-9-17	10-9-17	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	96	77-129				
<i>Toluene-d8</i>	96	80-127				
<i>4-Bromofluorobenzene</i>	99	78-125				



Date of Report: October 13, 2017  
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 Laboratory Reference: 1710-061  
 Project: 4082-039-01

PAHs EPA 8270D/SIM

Matrix: Water  
 Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>FL363-B4-171004-W</b>					
Laboratory ID:	10-061-01					
Naphthalene	<b>130</b>	5.7	EPA 8270D/SIM	10-6-17	10-11-17	
2-Methylnaphthalene	<b>68</b>	5.7	EPA 8270D/SIM	10-6-17	10-11-17	
1-Methylnaphthalene	<b>35</b>	5.7	EPA 8270D/SIM	10-6-17	10-11-17	
Acenaphthylene	<b>ND</b>	0.11	EPA 8270D/SIM	10-6-17	10-9-17	
Acenaphthene	<b>0.24</b>	0.11	EPA 8270D/SIM	10-6-17	10-9-17	
Fluorene	<b>0.21</b>	0.11	EPA 8270D/SIM	10-6-17	10-9-17	
Phenanthrene	<b>0.18</b>	0.11	EPA 8270D/SIM	10-6-17	10-9-17	
Anthracene	<b>ND</b>	0.11	EPA 8270D/SIM	10-6-17	10-9-17	
Fluoranthene	<b>ND</b>	0.11	EPA 8270D/SIM	10-6-17	10-9-17	
Pyrene	<b>ND</b>	0.11	EPA 8270D/SIM	10-6-17	10-9-17	
Benzo[a]anthracene	<b>ND</b>	0.011	EPA 8270D/SIM	10-6-17	10-9-17	
Chrysene	<b>ND</b>	0.011	EPA 8270D/SIM	10-6-17	10-9-17	
Benzo[b]fluoranthene	<b>ND</b>	0.011	EPA 8270D/SIM	10-6-17	10-9-17	
Benzo(j,k)fluoranthene	<b>ND</b>	0.011	EPA 8270D/SIM	10-6-17	10-9-17	
Benzo[a]pyrene	<b>ND</b>	0.011	EPA 8270D/SIM	10-6-17	10-9-17	
Indeno(1,2,3-c,d)pyrene	<b>ND</b>	0.011	EPA 8270D/SIM	10-6-17	10-9-17	
Dibenz[a,h]anthracene	<b>ND</b>	0.011	EPA 8270D/SIM	10-6-17	10-9-17	
Benzo[g,h,i]perylene	<b>ND</b>	0.011	EPA 8270D/SIM	10-6-17	10-9-17	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>2-Fluorobiphenyl</i>	<i>65</i>	<i>30 - 124</i>				
<i>Pyrene-d10</i>	<i>65</i>	<i>40 - 143</i>				
<i>Terphenyl-d14</i>	<i>90</i>	<i>27 - 127</i>				



Date of Report: October 13, 2017  
 Samples Submitted: October 5, 2017  
 Laboratory Reference: 1710-061  
 Project: 4082-039-01

PAHs EPA 8270D/SIM

Matrix: Water  
 Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>FL363-B5-171004-W</b>					
Laboratory ID:	10-061-02					
Naphthalene	16	1.0	EPA 8270D/SIM	10-6-17	10-10-17	
2-Methylnaphthalene	14	1.0	EPA 8270D/SIM	10-6-17	10-10-17	
1-Methylnaphthalene	8.2	1.0	EPA 8270D/SIM	10-6-17	10-10-17	
Acenaphthylene	ND	0.10	EPA 8270D/SIM	10-6-17	10-9-17	
Acenaphthene	ND	0.10	EPA 8270D/SIM	10-6-17	10-9-17	
Fluorene	ND	0.10	EPA 8270D/SIM	10-6-17	10-9-17	
Phenanthrene	ND	0.10	EPA 8270D/SIM	10-6-17	10-9-17	
Anthracene	ND	0.10	EPA 8270D/SIM	10-6-17	10-9-17	
Fluoranthene	ND	0.10	EPA 8270D/SIM	10-6-17	10-9-17	
Pyrene	ND	0.10	EPA 8270D/SIM	10-6-17	10-9-17	
Benzo[a]anthracene	ND	0.010	EPA 8270D/SIM	10-6-17	10-9-17	
Chrysene	ND	0.010	EPA 8270D/SIM	10-6-17	10-9-17	
Benzo[b]fluoranthene	ND	0.010	EPA 8270D/SIM	10-6-17	10-9-17	
Benzo(j,k)fluoranthene	ND	0.010	EPA 8270D/SIM	10-6-17	10-9-17	
Benzo[a]pyrene	ND	0.010	EPA 8270D/SIM	10-6-17	10-9-17	
Indeno(1,2,3-c,d)pyrene	ND	0.010	EPA 8270D/SIM	10-6-17	10-9-17	
Dibenz[a,h]anthracene	ND	0.010	EPA 8270D/SIM	10-6-17	10-9-17	
Benzo[g,h,i]perylene	ND	0.010	EPA 8270D/SIM	10-6-17	10-9-17	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>2-Fluorobiphenyl</i>	<i>93</i>	<i>30 - 124</i>				
<i>Pyrene-d10</i>	<i>54</i>	<i>40 - 143</i>				
<i>Terphenyl-d14</i>	<i>98</i>	<i>27 - 127</i>				



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PAHs EPA 8270D/SIM

Matrix: Water  
 Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>FL363-B6-171004-W</b>					
Laboratory ID:	10-061-03					
Naphthalene	ND	0.11	EPA 8270D/SIM	10-6-17	10-9-17	
2-Methylnaphthalene	ND	0.11	EPA 8270D/SIM	10-6-17	10-9-17	
1-Methylnaphthalene	ND	0.11	EPA 8270D/SIM	10-6-17	10-9-17	
Acenaphthylene	ND	0.11	EPA 8270D/SIM	10-6-17	10-9-17	
Acenaphthene	ND	0.11	EPA 8270D/SIM	10-6-17	10-9-17	
Fluorene	ND	0.11	EPA 8270D/SIM	10-6-17	10-9-17	
Phenanthrene	ND	0.11	EPA 8270D/SIM	10-6-17	10-9-17	
Anthracene	ND	0.11	EPA 8270D/SIM	10-6-17	10-9-17	
Fluoranthene	ND	0.11	EPA 8270D/SIM	10-6-17	10-9-17	
Pyrene	ND	0.11	EPA 8270D/SIM	10-6-17	10-9-17	
Benzo[a]anthracene	ND	0.011	EPA 8270D/SIM	10-6-17	10-9-17	
Chrysene	ND	0.011	EPA 8270D/SIM	10-6-17	10-9-17	
Benzo[b]fluoranthene	ND	0.011	EPA 8270D/SIM	10-6-17	10-9-17	
Benzo(j,k)fluoranthene	ND	0.011	EPA 8270D/SIM	10-6-17	10-9-17	
Benzo[a]pyrene	ND	0.011	EPA 8270D/SIM	10-6-17	10-9-17	
Indeno(1,2,3-c,d)pyrene	ND	0.011	EPA 8270D/SIM	10-6-17	10-9-17	
Dibenz[a,h]anthracene	ND	0.011	EPA 8270D/SIM	10-6-17	10-9-17	
Benzo[g,h,i]perylene	ND	0.011	EPA 8270D/SIM	10-6-17	10-9-17	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>2-Fluorobiphenyl</i>	<i>59</i>	<i>30 - 124</i>				
<i>Pyrene-d10</i>	<i>54</i>	<i>40 - 143</i>				
<i>Terphenyl-d14</i>	<i>75</i>	<i>27 - 127</i>				



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PAHs EPA 8270D/SIM

Matrix: Water  
 Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>FL363-B7-171004-W</b>					
Laboratory ID:	10-061-04					
Naphthalene	ND	0.12	EPA 8270D/SIM	10-6-17	10-9-17	
2-Methylnaphthalene	ND	0.12	EPA 8270D/SIM	10-6-17	10-9-17	
1-Methylnaphthalene	ND	0.12	EPA 8270D/SIM	10-6-17	10-9-17	
Acenaphthylene	ND	0.12	EPA 8270D/SIM	10-6-17	10-9-17	
Acenaphthene	ND	0.12	EPA 8270D/SIM	10-6-17	10-9-17	
Fluorene	ND	0.12	EPA 8270D/SIM	10-6-17	10-9-17	
Phenanthrene	ND	0.12	EPA 8270D/SIM	10-6-17	10-9-17	
Anthracene	ND	0.12	EPA 8270D/SIM	10-6-17	10-9-17	
Fluoranthene	ND	0.12	EPA 8270D/SIM	10-6-17	10-9-17	
Pyrene	ND	0.12	EPA 8270D/SIM	10-6-17	10-9-17	
Benzo[a]anthracene	ND	0.012	EPA 8270D/SIM	10-6-17	10-9-17	
Chrysene	ND	0.012	EPA 8270D/SIM	10-6-17	10-9-17	
Benzo[b]fluoranthene	ND	0.012	EPA 8270D/SIM	10-6-17	10-9-17	
Benzo(j,k)fluoranthene	ND	0.012	EPA 8270D/SIM	10-6-17	10-9-17	
Benzo[a]pyrene	ND	0.012	EPA 8270D/SIM	10-6-17	10-9-17	
Indeno(1,2,3-c,d)pyrene	ND	0.012	EPA 8270D/SIM	10-6-17	10-9-17	
Dibenz[a,h]anthracene	ND	0.012	EPA 8270D/SIM	10-6-17	10-9-17	
Benzo[g,h,i]perylene	ND	0.012	EPA 8270D/SIM	10-6-17	10-9-17	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>2-Fluorobiphenyl</i>	<i>34</i>	<i>30 - 124</i>				
<i>Pyrene-d10</i>	<i>34</i>	<i>40 - 143</i>				Q
<i>Terphenyl-d14</i>	<i>41</i>	<i>27 - 127</i>				



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**TOTAL LEAD**  
**EPA 200.8**

Matrix: Water  
 Units: ug/L (ppb)

<b>Analyte</b>	<b>Result</b>	<b>PQL</b>	<b>EPA Method</b>	<b>Date Prepared</b>	<b>Date Analyzed</b>	<b>Flags</b>
Lab ID:	10-061-01					
<b>Client ID:</b>	<b>FL363-B4-171004-W</b>					
Lead	<b>29</b>	2.0	200.8	10-6-17	10-9-17	
Lab ID:	10-061-02					
<b>Client ID:</b>	<b>FL363-B5-171004-W</b>					
Lead	<b>29</b>	2.0	200.8	10-6-17	10-9-17	
Lab ID:	10-061-03					
<b>Client ID:</b>	<b>FL363-B6-171004-W</b>					
Lead	<b>50</b>	2.0	200.8	10-6-17	10-9-17	
Lab ID:	10-061-04					
<b>Client ID:</b>	<b>FL363-B7-171004-W</b>					
Lead	<b>180</b>	10	200.8	10-6-17	10-9-17	



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 Project: 4082-039-01

**NWTPH-Gx  
 QUALITY CONTROL**

Matrix: Water  
 Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>METHOD BLANK</b>						
Laboratory ID:	MB1006W1					
Gasoline	<b>ND</b>	100	NWTPH-Gx	10-6-17	10-6-17	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Fluorobenzene</i>	98	61-118				
Laboratory ID:	MB1009W2					
Gasoline	<b>ND</b>	100	NWTPH-Gx	10-9-17	10-9-17	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Fluorobenzene</i>	94	61-118				

Analyte	Result	Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
<b>DUPLICATE</b>								
Laboratory ID:	10-078-01							
	ORIG	DUP						
Gasoline	<b>ND</b>	<b>ND</b>	NA	NA	NA	NA	NA	30
<i>Surrogate:</i>								
<i>Fluorobenzene</i>				93	79	61-118		
Laboratory ID:	10-081-02							
	ORIG	DUP						
Gasoline	<b>ND</b>	<b>ND</b>	NA	NA	NA	NA	NA	30
<i>Surrogate:</i>								
<i>Fluorobenzene</i>				105	73	61-118		



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**NWTPH-Dx  
 QUALITY CONTROL**

Matrix: Water  
 Units: mg/L (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>METHOD BLANK</b>						
Laboratory ID:	MB1011W1					
Diesel Range Organics	<b>ND</b>	0.25	NWTPH-Dx	10-11-17	10-12-17	
Lube Oil Range Organics	<b>ND</b>	0.40	NWTPH-Dx	10-11-17	10-12-17	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	83	50-150				

Analyte	Result	Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
<b>DUPLICATE</b>								
Laboratory ID:	10-027-02							
	ORIG	DUP						
Diesel Range Organics	<b>0.311</b>	<b>0.269</b>	NA	NA	NA	NA	14	NA
Lube Oil	<b>0.485</b>	<b>0.422</b>	NA	NA	NA	NA	14	NA
<i>Surrogate:</i>								
<i>o-Terphenyl</i>				86	91	50-150		



Date of Report: October 13, 2017  
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**VOLATILES by EPA 8260C**  
**METHOD BLANK QUALITY CONTROL**  
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Matrix: Water  
 Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB1009W1					
Dichlorodifluoromethane	ND	0.37	EPA 8260C	10-9-17	10-9-17	
Chloromethane	ND	1.0	EPA 8260C	10-9-17	10-9-17	
Vinyl Chloride	ND	0.20	EPA 8260C	10-9-17	10-9-17	
Bromomethane	ND	0.20	EPA 8260C	10-9-17	10-9-17	
Chloroethane	ND	1.0	EPA 8260C	10-9-17	10-9-17	
Trichlorofluoromethane	ND	0.20	EPA 8260C	10-9-17	10-9-17	
1,1-Dichloroethene	ND	0.20	EPA 8260C	10-9-17	10-9-17	
Acetone	ND	10	EPA 8260C	10-9-17	10-9-17	
Iodomethane	ND	1.3	EPA 8260C	10-9-17	10-9-17	
Carbon Disulfide	ND	0.20	EPA 8260C	10-9-17	10-9-17	
Methylene Chloride	ND	1.0	EPA 8260C	10-9-17	10-9-17	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260C	10-9-17	10-9-17	
Methyl t-Butyl Ether	ND	0.20	EPA 8260C	10-9-17	10-9-17	
1,1-Dichloroethane	ND	0.20	EPA 8260C	10-9-17	10-9-17	
Vinyl Acetate	ND	1.0	EPA 8260C	10-9-17	10-9-17	
2,2-Dichloropropane	ND	0.20	EPA 8260C	10-9-17	10-9-17	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260C	10-9-17	10-9-17	
2-Butanone	ND	5.0	EPA 8260C	10-9-17	10-9-17	
Bromochloromethane	ND	0.20	EPA 8260C	10-9-17	10-9-17	
Chloroform	ND	0.20	EPA 8260C	10-9-17	10-9-17	
1,1,1-Trichloroethane	ND	0.20	EPA 8260C	10-9-17	10-9-17	
Carbon Tetrachloride	ND	0.20	EPA 8260C	10-9-17	10-9-17	
1,1-Dichloropropene	ND	0.20	EPA 8260C	10-9-17	10-9-17	
Benzene	ND	0.20	EPA 8260C	10-9-17	10-9-17	
1,2-Dichloroethane	ND	0.20	EPA 8260C	10-9-17	10-9-17	
Trichloroethene	ND	0.20	EPA 8260C	10-9-17	10-9-17	
1,2-Dichloropropane	ND	0.20	EPA 8260C	10-9-17	10-9-17	
Dibromomethane	ND	0.20	EPA 8260C	10-9-17	10-9-17	
Bromodichloromethane	ND	0.20	EPA 8260C	10-9-17	10-9-17	
2-Chloroethyl Vinyl Ether	ND	3.9	EPA 8260C	10-9-17	10-9-17	
(cis) 1,3-Dichloropropene	ND	0.20	EPA 8260C	10-9-17	10-9-17	
Methyl Isobutyl Ketone	ND	2.5	EPA 8260C	10-9-17	10-9-17	
Toluene	ND	1.0	EPA 8260C	10-9-17	10-9-17	
(trans) 1,3-Dichloropropene	ND	0.20	EPA 8260C	10-9-17	10-9-17	



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**VOLATILES by EPA 8260C**  
**METHOD BLANK QUALITY CONTROL**  
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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB1009W1					
1,1,2-Trichloroethane	ND	0.20	EPA 8260C	10-9-17	10-9-17	
Tetrachloroethene	ND	0.20	EPA 8260C	10-9-17	10-9-17	
1,3-Dichloropropane	ND	0.20	EPA 8260C	10-9-17	10-9-17	
2-Hexanone	ND	2.0	EPA 8260C	10-9-17	10-9-17	
Dibromochloromethane	ND	0.20	EPA 8260C	10-9-17	10-9-17	
1,2-Dibromoethane	ND	0.20	EPA 8260C	10-9-17	10-9-17	
Chlorobenzene	ND	0.20	EPA 8260C	10-9-17	10-9-17	
1,1,1,2-Tetrachloroethane	ND	0.20	EPA 8260C	10-9-17	10-9-17	
Ethylbenzene	ND	0.20	EPA 8260C	10-9-17	10-9-17	
m,p-Xylene	ND	0.40	EPA 8260C	10-9-17	10-9-17	
o-Xylene	ND	0.20	EPA 8260C	10-9-17	10-9-17	
Styrene	ND	0.20	EPA 8260C	10-9-17	10-9-17	
Bromoform	ND	1.0	EPA 8260C	10-9-17	10-9-17	
Isopropylbenzene	ND	0.20	EPA 8260C	10-9-17	10-9-17	
Bromobenzene	ND	0.20	EPA 8260C	10-9-17	10-9-17	
1,1,2,2-Tetrachloroethane	ND	0.25	EPA 8260C	10-9-17	10-9-17	
1,2,3-Trichloropropane	ND	0.20	EPA 8260C	10-9-17	10-9-17	
n-Propylbenzene	ND	0.20	EPA 8260C	10-9-17	10-9-17	
2-Chlorotoluene	ND	0.20	EPA 8260C	10-9-17	10-9-17	
4-Chlorotoluene	ND	0.20	EPA 8260C	10-9-17	10-9-17	
1,3,5-Trimethylbenzene	ND	0.20	EPA 8260C	10-9-17	10-9-17	
tert-Butylbenzene	ND	0.20	EPA 8260C	10-9-17	10-9-17	
1,2,4-Trimethylbenzene	ND	0.20	EPA 8260C	10-9-17	10-9-17	
sec-Butylbenzene	ND	0.20	EPA 8260C	10-9-17	10-9-17	
1,3-Dichlorobenzene	ND	0.20	EPA 8260C	10-9-17	10-9-17	
p-Isopropyltoluene	ND	0.20	EPA 8260C	10-9-17	10-9-17	
1,4-Dichlorobenzene	ND	0.20	EPA 8260C	10-9-17	10-9-17	
1,2-Dichlorobenzene	ND	0.20	EPA 8260C	10-9-17	10-9-17	
n-Butylbenzene	ND	0.20	EPA 8260C	10-9-17	10-9-17	
1,2-Dibromo-3-chloropropane	ND	1.0	EPA 8260C	10-9-17	10-9-17	
1,2,4-Trichlorobenzene	ND	0.20	EPA 8260C	10-9-17	10-9-17	
Hexachlorobutadiene	ND	0.20	EPA 8260C	10-9-17	10-9-17	
Naphthalene	ND	1.4	EPA 8260C	10-9-17	10-9-17	
1,2,3-Trichlorobenzene	ND	0.20	EPA 8260C	10-9-17	10-9-17	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>92</i>	<i>77-129</i>				
<i>Toluene-d8</i>	<i>94</i>	<i>80-127</i>				
<i>4-Bromofluorobenzene</i>	<i>98</i>	<i>78-125</i>				



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**VOLATILES by EPA 8260C**  
**METHOD BLANK QUALITY CONTROL**  
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Matrix: Water  
 Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID: MB1010W1						
Dichlorodifluoromethane	ND	0.39	EPA 8260C	10-10-17	10-10-17	
Chloromethane	ND	1.0	EPA 8260C	10-10-17	10-10-17	
Vinyl Chloride	ND	0.20	EPA 8260C	10-10-17	10-10-17	
Bromomethane	ND	0.20	EPA 8260C	10-10-17	10-10-17	
Chloroethane	ND	1.0	EPA 8260C	10-10-17	10-10-17	
Trichlorofluoromethane	ND	0.20	EPA 8260C	10-10-17	10-10-17	
1,1-Dichloroethene	ND	0.20	EPA 8260C	10-10-17	10-10-17	
Acetone	ND	10	EPA 8260C	10-10-17	10-10-17	
Iodomethane	ND	1.4	EPA 8260C	10-10-17	10-10-17	
Carbon Disulfide	ND	0.20	EPA 8260C	10-10-17	10-10-17	
Methylene Chloride	ND	1.0	EPA 8260C	10-10-17	10-10-17	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260C	10-10-17	10-10-17	
Methyl t-Butyl Ether	ND	0.20	EPA 8260C	10-10-17	10-10-17	
1,1-Dichloroethane	ND	0.20	EPA 8260C	10-10-17	10-10-17	
Vinyl Acetate	ND	1.0	EPA 8260C	10-10-17	10-10-17	
2,2-Dichloropropane	ND	0.20	EPA 8260C	10-10-17	10-10-17	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260C	10-10-17	10-10-17	
2-Butanone	ND	5.0	EPA 8260C	10-10-17	10-10-17	
Bromochloromethane	ND	0.20	EPA 8260C	10-10-17	10-10-17	
Chloroform	ND	0.20	EPA 8260C	10-10-17	10-10-17	
1,1,1-Trichloroethane	ND	0.20	EPA 8260C	10-10-17	10-10-17	
Carbon Tetrachloride	ND	0.20	EPA 8260C	10-10-17	10-10-17	
1,1-Dichloropropene	ND	0.20	EPA 8260C	10-10-17	10-10-17	
Benzene	ND	0.20	EPA 8260C	10-10-17	10-10-17	
1,2-Dichloroethane	ND	0.20	EPA 8260C	10-10-17	10-10-17	
Trichloroethene	ND	0.20	EPA 8260C	10-10-17	10-10-17	
1,2-Dichloropropane	ND	0.20	EPA 8260C	10-10-17	10-10-17	
Dibromomethane	ND	0.20	EPA 8260C	10-10-17	10-10-17	
Bromodichloromethane	ND	0.20	EPA 8260C	10-10-17	10-10-17	
2-Chloroethyl Vinyl Ether	ND	4.5	EPA 8260C	10-10-17	10-10-17	
(cis) 1,3-Dichloropropene	ND	0.20	EPA 8260C	10-10-17	10-10-17	
Methyl Isobutyl Ketone	ND	2.0	EPA 8260C	10-10-17	10-10-17	
Toluene	ND	1.0	EPA 8260C	10-10-17	10-10-17	
(trans) 1,3-Dichloropropene	ND	0.20	EPA 8260C	10-10-17	10-10-17	



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**VOLATILES by EPA 8260C**  
**METHOD BLANK QUALITY CONTROL**  
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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:		MB1010W1				
1,1,2-Trichloroethane	ND	0.20	EPA 8260C	10-10-17	10-10-17	
Tetrachloroethene	ND	0.20	EPA 8260C	10-10-17	10-10-17	
1,3-Dichloropropane	ND	0.20	EPA 8260C	10-10-17	10-10-17	
2-Hexanone	ND	2.0	EPA 8260C	10-10-17	10-10-17	
Dibromochloromethane	ND	0.20	EPA 8260C	10-10-17	10-10-17	
1,2-Dibromoethane	ND	0.20	EPA 8260C	10-10-17	10-10-17	
Chlorobenzene	ND	0.20	EPA 8260C	10-10-17	10-10-17	
1,1,1,2-Tetrachloroethane	ND	0.20	EPA 8260C	10-10-17	10-10-17	
Ethylbenzene	ND	0.20	EPA 8260C	10-10-17	10-10-17	
m,p-Xylene	ND	0.40	EPA 8260C	10-10-17	10-10-17	
o-Xylene	ND	0.20	EPA 8260C	10-10-17	10-10-17	
Styrene	ND	0.20	EPA 8260C	10-10-17	10-10-17	
Bromoform	ND	1.0	EPA 8260C	10-10-17	10-10-17	
Isopropylbenzene	ND	0.20	EPA 8260C	10-10-17	10-10-17	
Bromobenzene	ND	0.20	EPA 8260C	10-10-17	10-10-17	
1,1,2,2-Tetrachloroethane	ND	0.20	EPA 8260C	10-10-17	10-10-17	
1,2,3-Trichloropropane	ND	0.20	EPA 8260C	10-10-17	10-10-17	
n-Propylbenzene	ND	0.20	EPA 8260C	10-10-17	10-10-17	
2-Chlorotoluene	ND	0.20	EPA 8260C	10-10-17	10-10-17	
4-Chlorotoluene	ND	0.20	EPA 8260C	10-10-17	10-10-17	
1,3,5-Trimethylbenzene	ND	0.20	EPA 8260C	10-10-17	10-10-17	
tert-Butylbenzene	ND	0.20	EPA 8260C	10-10-17	10-10-17	
1,2,4-Trimethylbenzene	ND	0.20	EPA 8260C	10-10-17	10-10-17	
sec-Butylbenzene	ND	0.20	EPA 8260C	10-10-17	10-10-17	
1,3-Dichlorobenzene	ND	0.20	EPA 8260C	10-10-17	10-10-17	
p-Isopropyltoluene	ND	0.20	EPA 8260C	10-10-17	10-10-17	
1,4-Dichlorobenzene	ND	0.20	EPA 8260C	10-10-17	10-10-17	
1,2-Dichlorobenzene	ND	0.20	EPA 8260C	10-10-17	10-10-17	
n-Butylbenzene	ND	0.20	EPA 8260C	10-10-17	10-10-17	
1,2-Dibromo-3-chloropropane	ND	1.0	EPA 8260C	10-10-17	10-10-17	
1,2,4-Trichlorobenzene	ND	0.20	EPA 8260C	10-10-17	10-10-17	
Hexachlorobutadiene	ND	0.20	EPA 8260C	10-10-17	10-10-17	
Naphthalene	ND	1.3	EPA 8260C	10-10-17	10-10-17	
1,2,3-Trichlorobenzene	ND	0.20	EPA 8260C	10-10-17	10-10-17	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>97</i>	<i>77-129</i>				
<i>Toluene-d8</i>	<i>97</i>	<i>80-127</i>				
<i>4-Bromofluorobenzene</i>	<i>98</i>	<i>78-125</i>				



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 Laboratory Reference: 1710-061  
 Project: 4082-039-01

**VOLATILES by EPA 8260C  
 SB/SBD QUALITY CONTROL**

Matrix: Water  
 Units: ug/L

Analyte	Result		Spike Level		Percent Recovery		Recovery	RPD		Flags
					Recovery	Limits	RPD	Limit		
<b>SPIKE BLANKS</b>										
Laboratory ID:	SB1009W1									
	SB	SBD	SB	SBD	SB	SBD				
1,1-Dichloroethene	<b>10.3</b>	<b>10.1</b>	10.0	10.0	103	101	63-127	2	17	
Benzene	<b>10.4</b>	<b>10.6</b>	10.0	10.0	104	106	76-121	2	12	
Trichloroethene	<b>9.48</b>	<b>9.18</b>	10.0	10.0	95	92	64-120	3	15	
Toluene	<b>10.2</b>	<b>10.2</b>	10.0	10.0	102	102	82-120	0	13	
Chlorobenzene	<b>10.3</b>	<b>9.83</b>	10.0	10.0	103	98	80-120	5	14	
<i>Surrogate:</i>										
<i>Dibromofluoromethane</i>					<i>91</i>	<i>94</i>	<i>77-129</i>			
<i>Toluene-d8</i>					<i>94</i>	<i>95</i>	<i>80-127</i>			
<i>4-Bromofluorobenzene</i>					<i>97</i>	<i>97</i>	<i>78-125</i>			



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**VOLATILES by EPA 8260C  
 SB/SBD QUALITY CONTROL**

Matrix: Water  
 Units: ug/L

Analyte	Result		Spike Level		Percent Recovery		Recovery	RPD		Flags
					Recovery	Limits	RPD	Limit		
<b>SPIKE BLANKS</b>										
Laboratory ID:	SB1010W1									
	SB	SBD	SB	SBD	SB	SBD				
1,1-Dichloroethene	10.7	10.3	10.0	10.0	107	103	63-127	4	17	
Benzene	10.9	10.9	10.0	10.0	109	109	76-121	0	12	
Trichloroethene	9.72	9.47	10.0	10.0	97	95	64-120	3	15	
Toluene	10.5	10.3	10.0	10.0	105	103	82-120	2	13	
Chlorobenzene	10.3	10.0	10.0	10.0	103	100	80-120	3	14	
<i>Surrogate:</i>										
Dibromofluoromethane					92	95	77-129			
Toluene-d8					97	96	80-127			
4-Bromofluorobenzene					96	97	78-125			



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 Project: 4082-039-01

**PAHs EPA 8270D/SIM  
 METHOD BLANK QUALITY CONTROL**

Matrix: Water  
 Units: ug/L

<b>Analyte</b>	<b>Result</b>	<b>PQL</b>	<b>Method</b>	<b>Date Prepared</b>	<b>Date Analyzed</b>	<b>Flags</b>
Laboratory ID:	MB1006W1					
Naphthalene	ND	0.10	EPA 8270D/SIM	10-6-17	10-6-17	
2-Methylnaphthalene	ND	0.10	EPA 8270D/SIM	10-6-17	10-6-17	
1-Methylnaphthalene	ND	0.10	EPA 8270D/SIM	10-6-17	10-6-17	
Acenaphthylene	ND	0.10	EPA 8270D/SIM	10-6-17	10-6-17	
Acenaphthene	ND	0.10	EPA 8270D/SIM	10-6-17	10-6-17	
Fluorene	ND	0.10	EPA 8270D/SIM	10-6-17	10-6-17	
Phenanthrene	ND	0.10	EPA 8270D/SIM	10-6-17	10-6-17	
Anthracene	ND	0.10	EPA 8270D/SIM	10-6-17	10-6-17	
Fluoranthene	ND	0.10	EPA 8270D/SIM	10-6-17	10-6-17	
Pyrene	ND	0.10	EPA 8270D/SIM	10-6-17	10-6-17	
Benzo[a]anthracene	ND	0.010	EPA 8270D/SIM	10-6-17	10-6-17	
Chrysene	ND	0.010	EPA 8270D/SIM	10-6-17	10-6-17	
Benzo[b]fluoranthene	ND	0.010	EPA 8270D/SIM	10-6-17	10-6-17	
Benzo(j,k)fluoranthene	ND	0.010	EPA 8270D/SIM	10-6-17	10-6-17	
Benzo[a]pyrene	ND	0.010	EPA 8270D/SIM	10-6-17	10-6-17	
Indeno(1,2,3-c,d)pyrene	ND	0.010	EPA 8270D/SIM	10-6-17	10-6-17	
Dibenz[a,h]anthracene	ND	0.010	EPA 8270D/SIM	10-6-17	10-6-17	
Benzo[g,h,i]perylene	ND	0.010	EPA 8270D/SIM	10-6-17	10-6-17	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>2-Fluorobiphenyl</i>	<i>52</i>	<i>30 - 124</i>				
<i>Pyrene-d10</i>	<i>67</i>	<i>40 - 143</i>				
<i>Terphenyl-d14</i>	<i>69</i>	<i>27 - 127</i>				



Date of Report: October 13, 2017  
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 Laboratory Reference: 1710-061  
 Project: 4082-039-01

**PAHs EPA 8270D/SIM  
 SB/SBD QUALITY CONTROL**

Matrix: Water  
 Units: ug/L

Analyte	Result		Spike Level		Percent Recovery		Recovery	RPD	RPD	Flags
					Recovery	Limits	Limit			
<b>SPIKE BLANKS</b>										
Laboratory ID:	SB1006W1									
	SB	SBD	SB	SBD	SB	SBD				
Naphthalene	0.153	0.224	0.500	0.500	31	45	29 - 101	38	47	
Acenaphthylene	0.241	0.279	0.500	0.500	48	56	20 - 117	15	50	
Acenaphthene	0.219	0.262	0.500	0.500	44	52	37 - 109	18	43	
Fluorene	0.261	0.288	0.500	0.500	52	58	47 - 108	10	34	
Phenanthrene	0.286	0.307	0.500	0.500	57	61	49 - 109	7	28	
Anthracene	0.308	0.329	0.500	0.500	62	66	34 - 140	7	32	
Fluoranthene	0.303	0.320	0.500	0.500	61	64	45 - 120	5	39	
Pyrene	0.296	0.326	0.500	0.500	59	65	42 - 133	10	39	
Benzo[a]anthracene	0.325	0.347	0.500	0.500	65	69	47 - 117	7	28	
Chrysene	0.303	0.322	0.500	0.500	61	64	53 - 110	6	25	
Benzo[b]fluoranthene	0.303	0.332	0.500	0.500	61	66	53 - 123	9	37	
Benzo(j,k)fluoranthene	0.310	0.335	0.500	0.500	62	67	52 - 119	8	41	
Benzo[a]pyrene	0.297	0.321	0.500	0.500	59	64	37 - 129	8	33	
Indeno(1,2,3-c,d)pyrene	0.304	0.331	0.500	0.500	61	66	45 - 128	9	31	
Dibenz[a,h]anthracene	0.304	0.334	0.500	0.500	61	67	54 - 120	9	30	
Benzo[g,h,i]perylene	0.296	0.322	0.500	0.500	59	64	49 - 117	8	29	
<i>Surrogate:</i>										
2-Fluorobiphenyl					46	56	30 - 124			
Pyrene-d10					63	65	40 - 143			
Terphenyl-d14					65	68	27 - 127			



Date of Report: October 13, 2017  
Samples Submitted: October 5, 2017  
Laboratory Reference: 1710-061  
Project: 4082-039-01

**TOTAL LEAD  
EPA 200.8  
METHOD BLANK QUALITY CONTROL**

Date Extracted: 10-6-17  
Date Analyzed: 10-9-17  
  
Matrix: Water  
Units: ug/L (ppb)  
  
Lab ID: MB1006WH1

Analyte	Method	Result	PQL
Lead	200.8	<b>ND</b>	1.0



Date of Report: October 13, 2017  
Samples Submitted: October 5, 2017  
Laboratory Reference: 1710-061  
Project: 4082-039-01

**TOTAL LEAD  
EPA 200.8  
DUPLICATE QUALITY CONTROL**

Date Extracted: 10-6-17

Date Analyzed: 10-9-17

Matrix: Water

Units: ug/L (ppb)

Lab ID: 10-059-04

Analyte	Sample Result	Duplicate Result	RPD	PQL	Flags
Lead	<b>ND</b>	<b>ND</b>	NA	1.0	



Date of Report: October 13, 2017  
Samples Submitted: October 5, 2017  
Laboratory Reference: 1710-061  
Project: 4082-039-01

**TOTAL LEAD  
EPA 200.8  
MS/MSD QUALITY CONTROL**

Date Extracted: 10-6-17

Date Analyzed: 10-9-17

Matrix: Water

Units: ug/L (ppb)

Lab ID: 10-059-04

Analyte	Spike Level	MS	Percent Recovery	MSD	Percent Recovery	RPD	Flags
Lead	100	<b>85.2</b>	85	<b>84.6</b>	85	1	





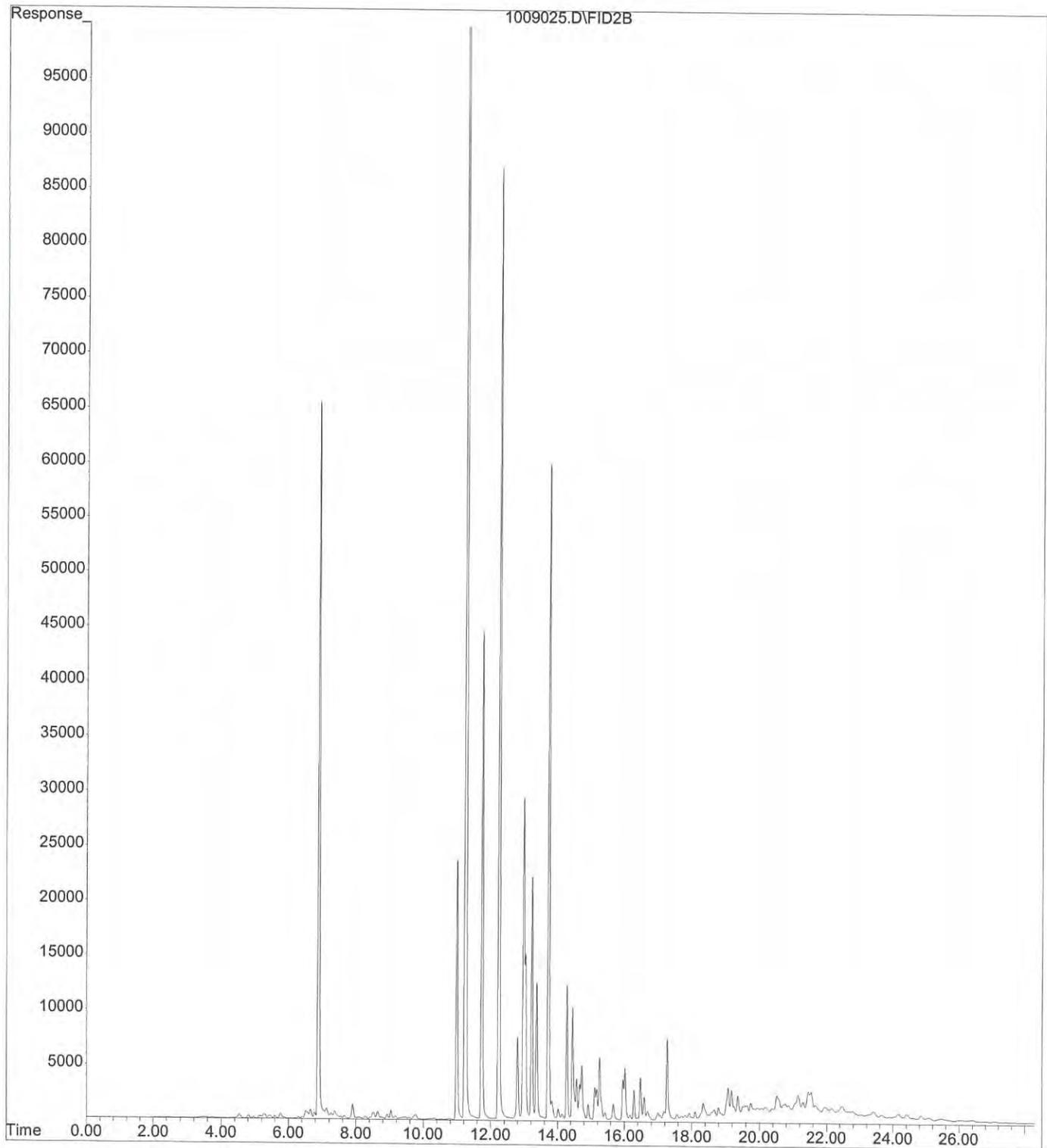
### Data Qualifiers and Abbreviations

- A - Due to a high sample concentration, the amount spiked is insufficient for meaningful MS/MSD recovery data.
  - B - The analyte indicated was also found in the blank sample.
  - C - The duplicate RPD is outside control limits due to high result variability when analyte concentrations are within five times the quantitation limit.
  - E - The value reported exceeds the quantitation range and is an estimate.
  - F - Surrogate recovery data is not available due to the high concentration of coeluting target compounds.
  - H - The analyte indicated is a common laboratory solvent and may have been introduced during sample preparation, and be impacting the sample result.
  - I - Compound recovery is outside of the control limits.
  - J - The value reported was below the practical quantitation limit. The value is an estimate.
  - K - Sample duplicate RPD is outside control limits due to sample inhomogeneity. The sample was re-extracted and re-analyzed with similar results.
  - L - The RPD is outside of the control limits.
  - M - Hydrocarbons in the gasoline range are impacting the diesel range result.
  - M1 - Hydrocarbons in the gasoline range (toluene-naphthalene) are present in the sample.
  - N - Hydrocarbons in the lube oil range are impacting the diesel range result.
  - N1 - Hydrocarbons in diesel range are impacting lube oil range results.
  - O - Hydrocarbons indicative of heavier fuels are present in the sample and are impacting the gasoline result.
  - P - The RPD of the detected concentrations between the two columns is greater than 40.
  - Q - Surrogate recovery is outside of the control limits.
  - S - Surrogate recovery data is not available due to the necessary dilution of the sample.
  - T - The sample chromatogram is not similar to a typical \_\_\_\_\_.
  - U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.
  - U1 - The practical quantitation limit is elevated due to interferences present in the sample.
  - V - Matrix Spike/Matrix Spike Duplicate recoveries are outside control limits due to matrix effects.
  - W - Matrix Spike/Matrix Spike Duplicate RPD are outside control limits due to matrix effects.
  - X - Sample extract treated with a mercury cleanup procedure.
  - X1 - Sample extract treated with a Sulfuric acid/Silica gel cleanup procedure.
  - Y - The calibration verification for this analyte exceeded the 20% drift specified in method 8260C, and therefore the reported result should be considered an estimate. The overall performance of the calibration verification standard met the acceptance criteria of the method.
  - Z -
- ND - Not Detected at PQL  
 PQL - Practical Quantitation Limit  
 RPD - Relative Percent Difference

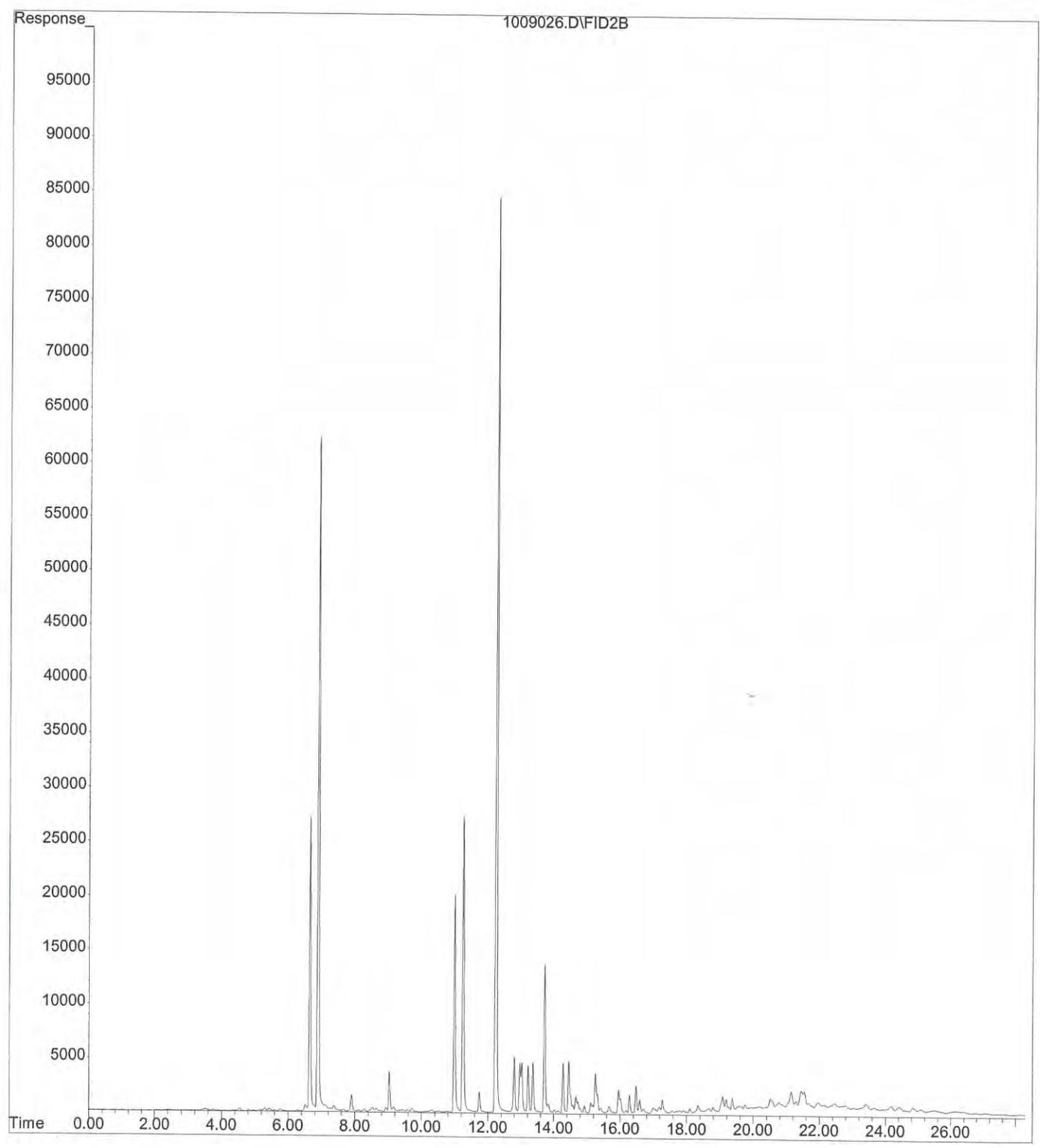




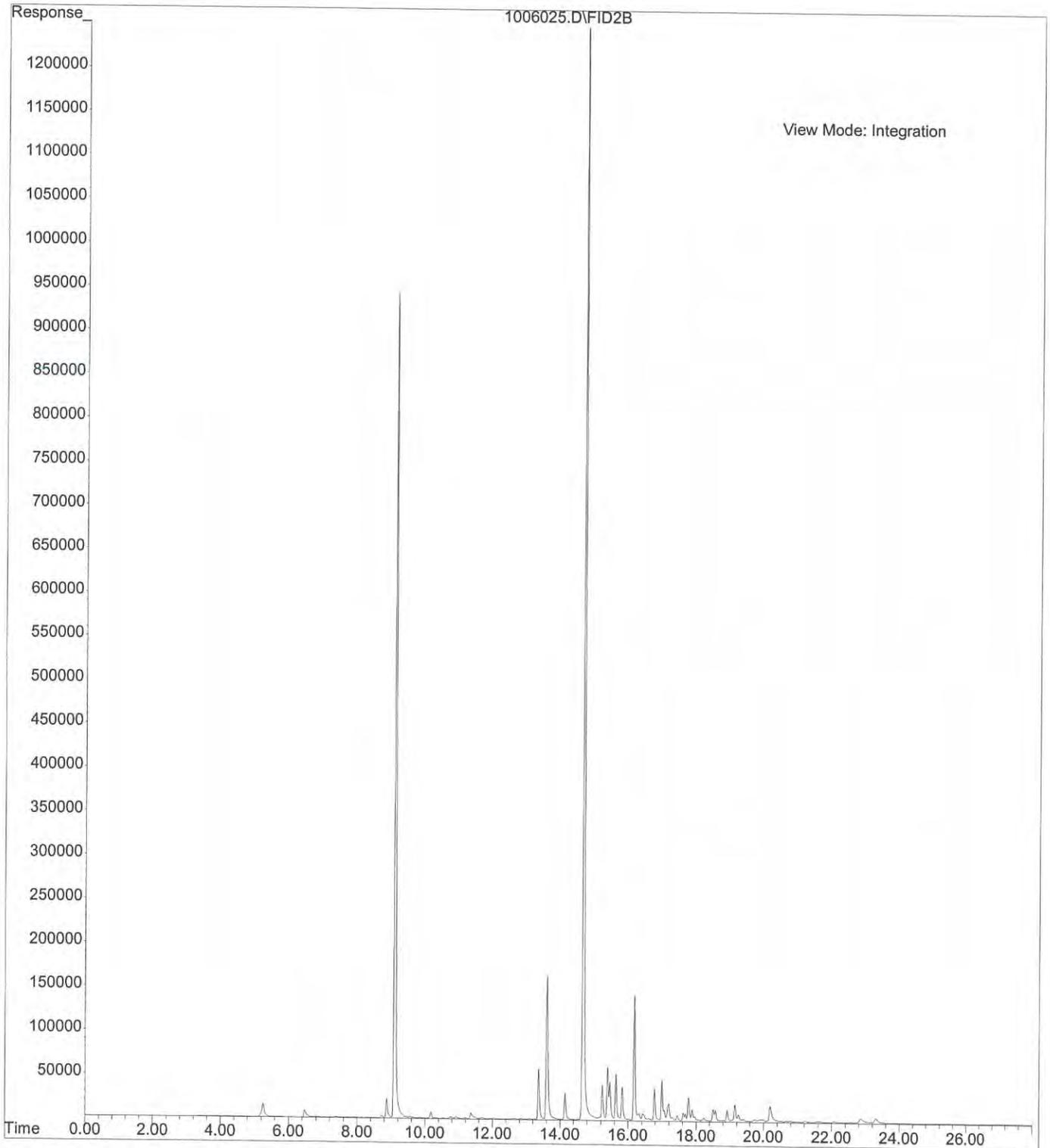
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Instrument : Daryl  
Sample Name: 10-061-01h rr 1:50  
Misc Info :  
Vial Number: 25



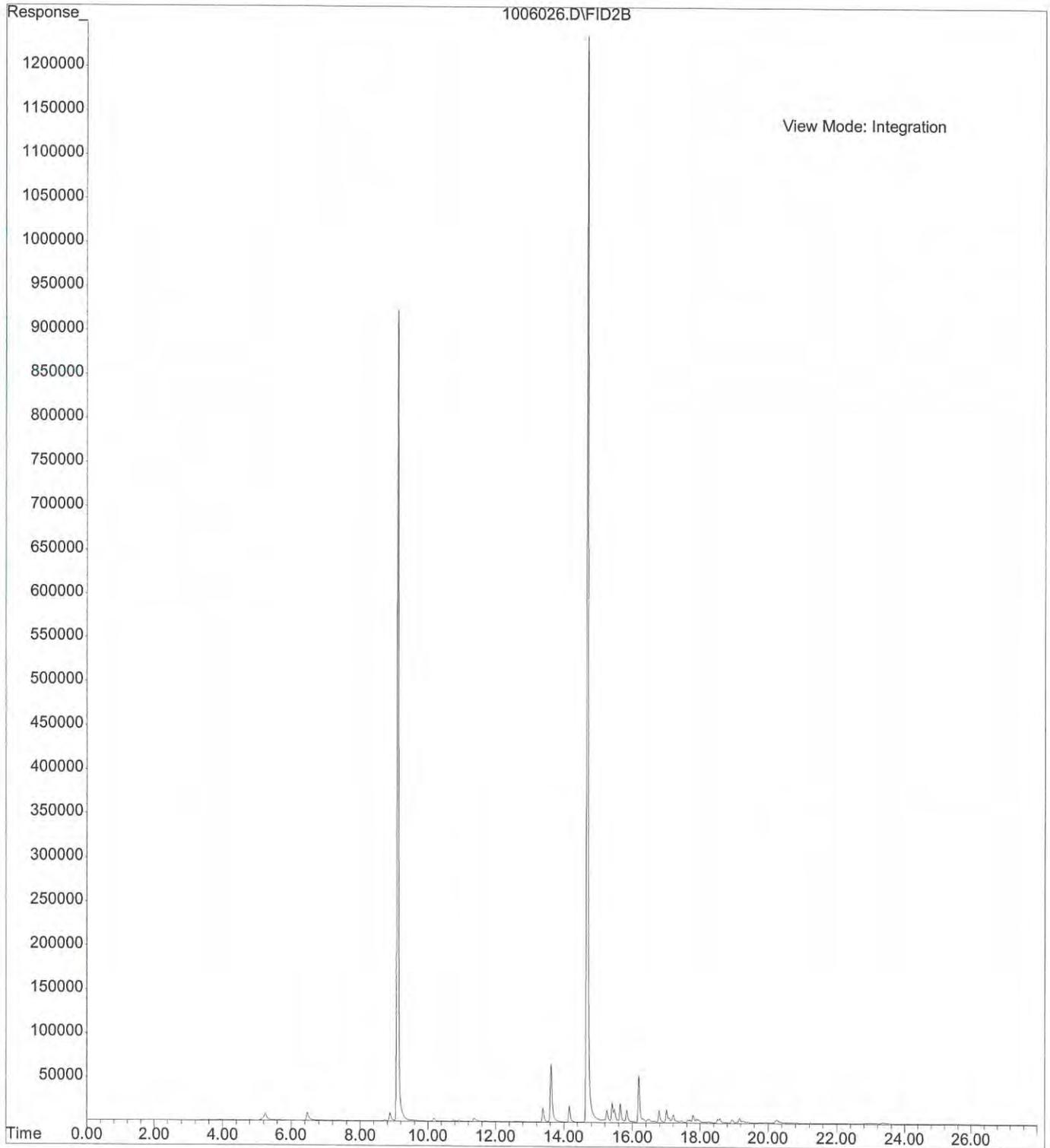
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Instrument : Daryl  
Sample Name: 10-061-02i rr 1:50  
Misc Info :  
Vial Number: 26



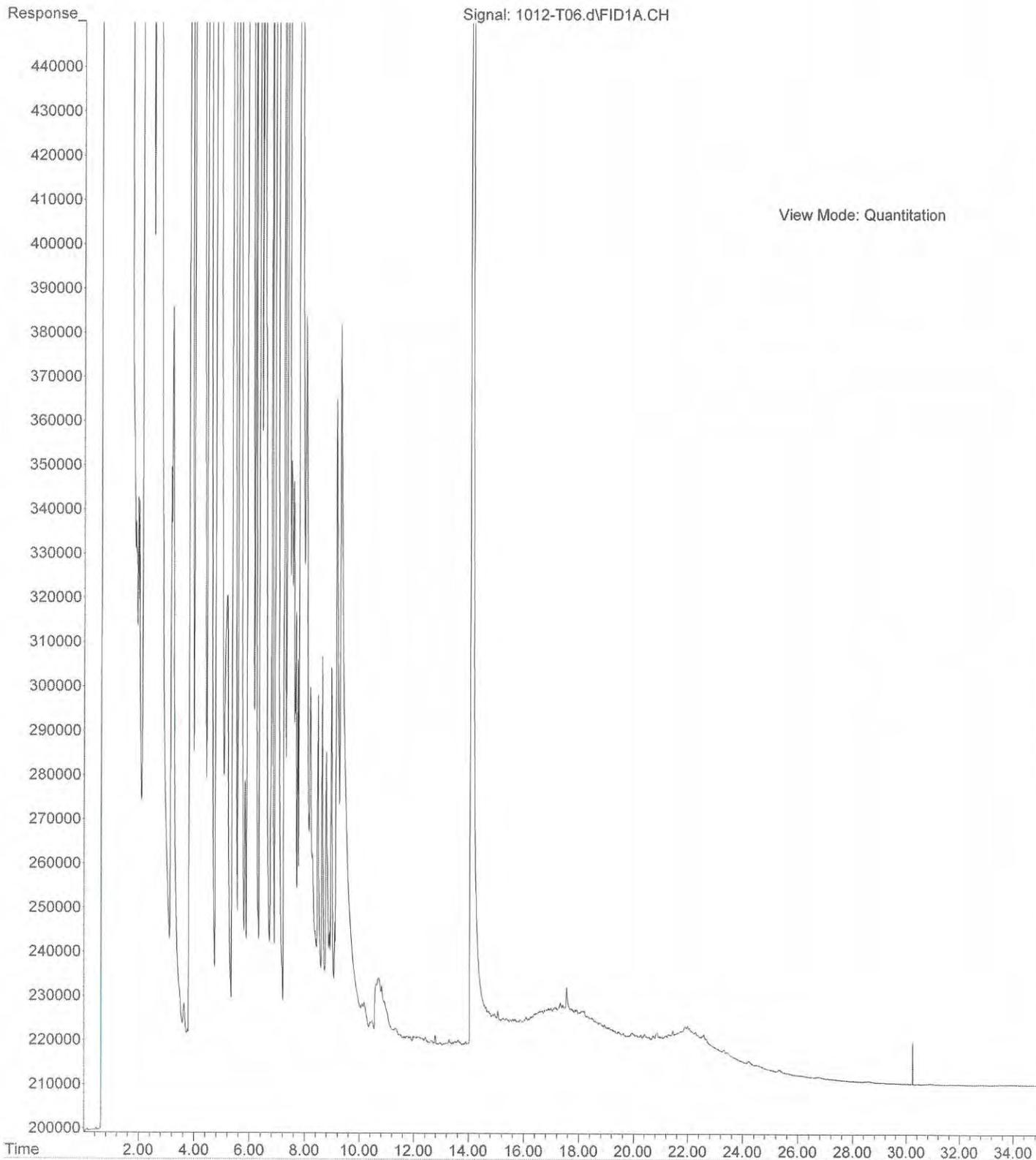
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Instrument : Hope  
Sample Name: 10-061-03e  
Misc Info :  
Vial Number: 25



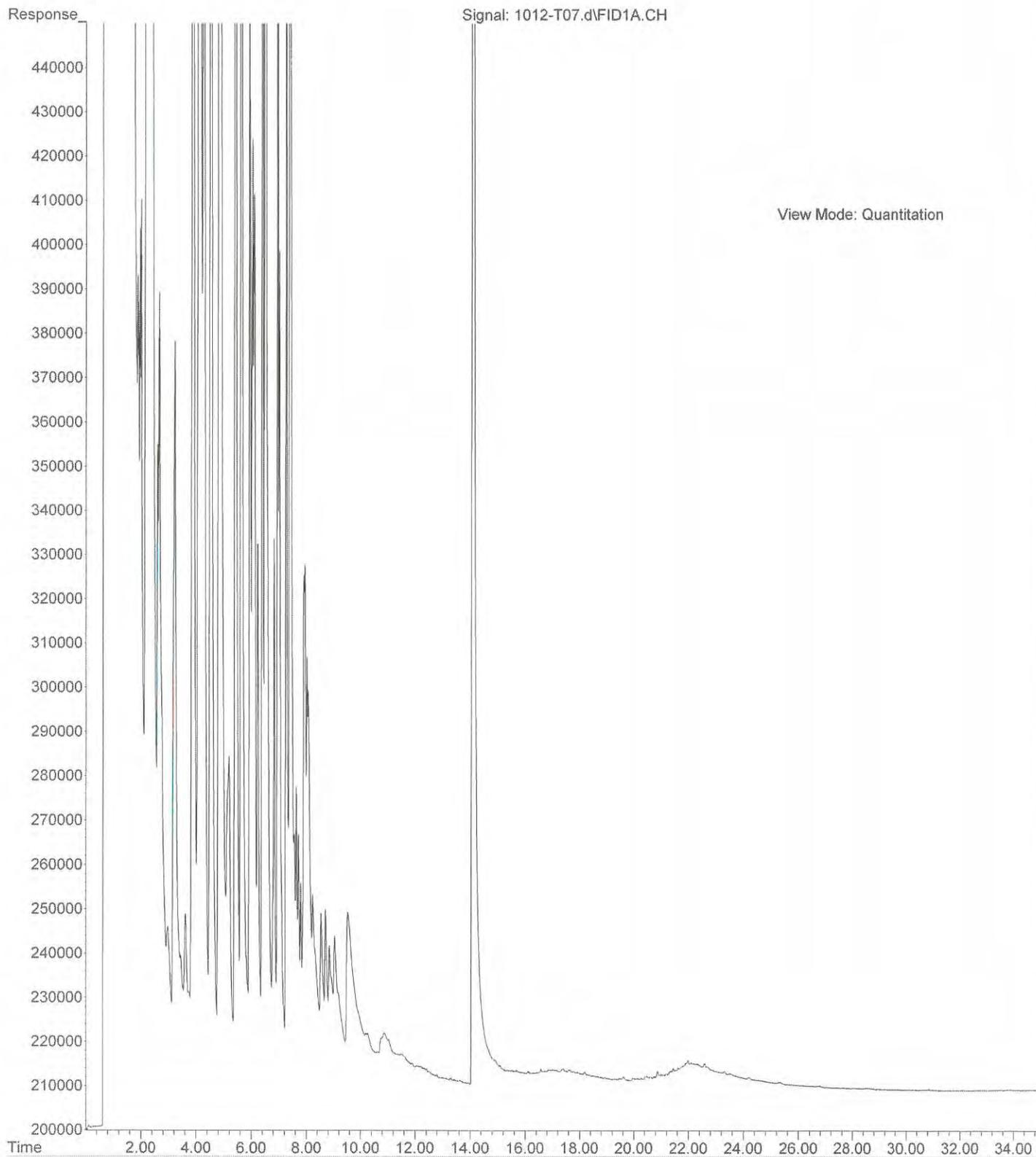
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Instrument : Hope  
Sample Name: 10-061-04e  
Misc Info :  
Vial Number: 26



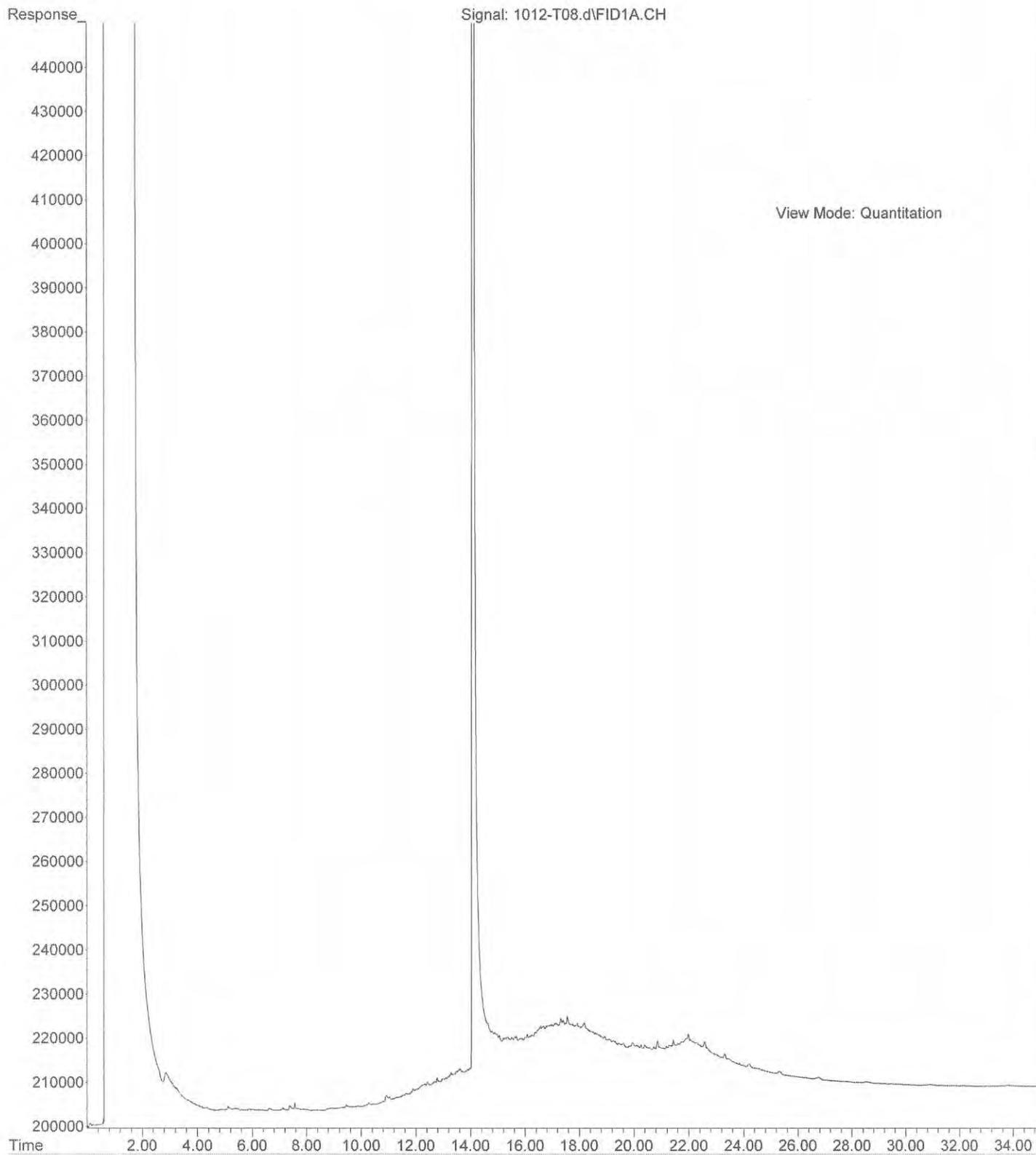
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Operator : ZT  
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Instrument : Teri  
Sample Name: 10-061-01  
Misc Info :  
Vial Number: 6



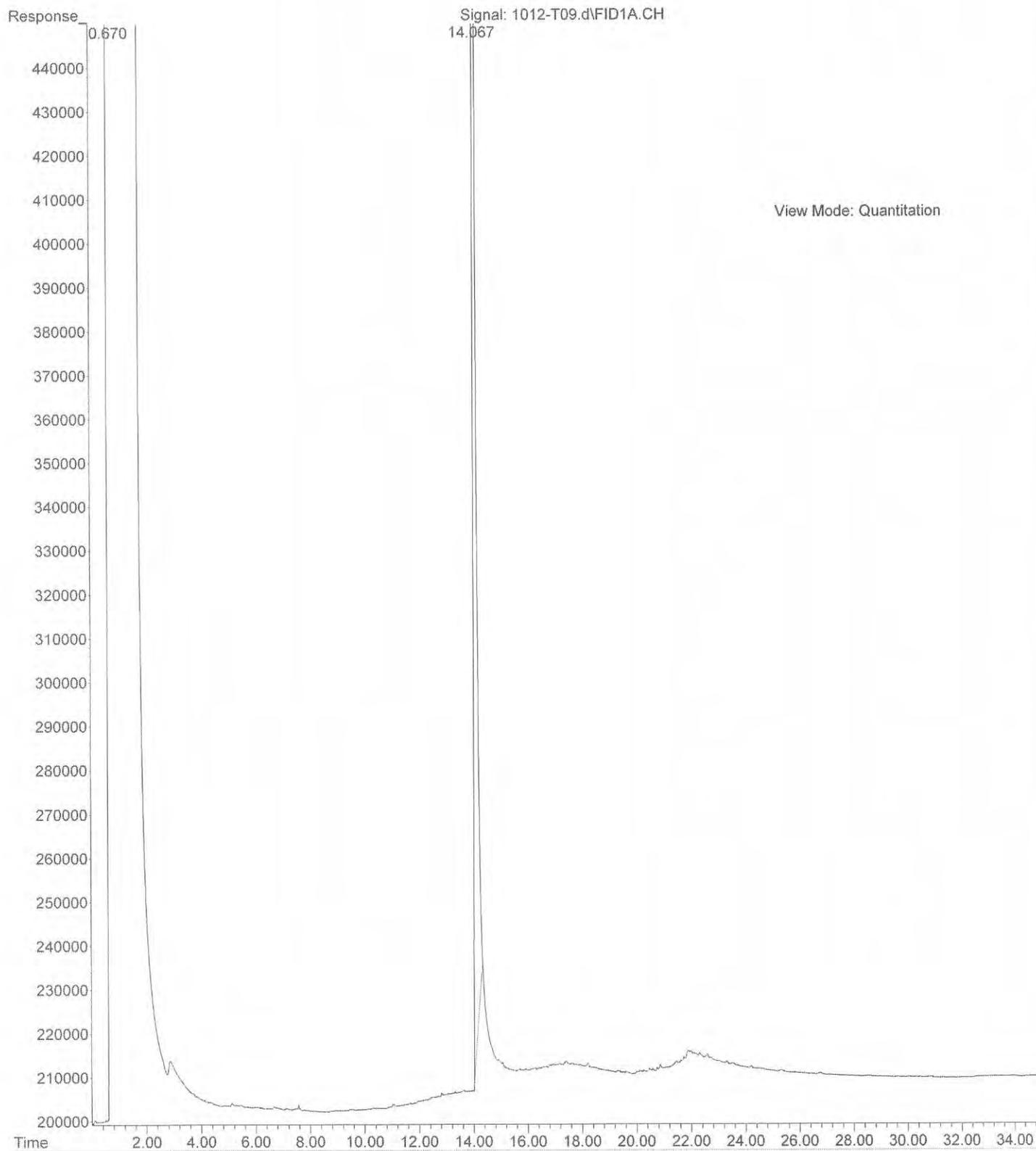
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Instrument : Teri  
Sample Name: 10-061-02  
Misc Info :  
Vial Number: 7



File :C:\msdchem\1\data\T171012\1012-T08.d  
Operator : ZT  
Acquired : 12 Oct 2017 15:02 using AcqMethod T161216F.M  
Instrument : Teri  
Sample Name: 10-061-03  
Misc Info :  
Vial Number: 8



File :C:\msdchem\1\data\T171012\1012-T09.d  
Operator : ZT  
Acquired : 12 Oct 2017 15:44 using AcqMethod T161216F.M  
Instrument : Teri  
Sample Name: 10-061-04  
Misc Info :  
Vial Number: 9





14648 NE 95<sup>th</sup> Street, Redmond, WA 98052 • (425) 883-3881

October 12, 2017

Marsi Beeson  
GeoEngineers, Inc.  
12000 NW Naito Prkway, Suite 180  
Portland, OR 97209

Re: Analytical Data for Project 4082-039-01  
Laboratory Reference No. 1710-010

Dear Marsi:

Enclosed are the analytical results and associated quality control data for samples submitted on October 2, 2017.

The standard policy of OnSite Environmental, Inc. is to store your samples for 30 days from the date of receipt. If you require longer storage, please contact the laboratory.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning the data, or need additional information, please feel free to call me.

Sincerely,

A handwritten signature in black ink, appearing to read "DB", with a long horizontal stroke extending to the right.

David Baumeister  
Project Manager

Enclosures



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OnSite Environmental, Inc. 14648 NE 95<sup>th</sup> Street, Redmond, WA 98052 (425) 883-3881

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: October 12, 2017  
Samples Submitted: October 2, 2017  
Laboratory Reference: 1710-010  
Project: 4082-039-01

### Case Narrative

Samples were collected on October 2, 2017 and received by the laboratory on October 2, 2017. They were maintained at the laboratory at a temperature of 2°C to 6°C.

Please note that any and all soil sample results are reported on a dry-weight basis, unless otherwise noted below.

General QA/QC issues associated with the analytical data enclosed in this laboratory report will be indicated with a reference to a comment or explanation on the Data Qualifier page. More complex and involved QA/QC issues will be discussed in detail below.



Date of Report: October 12, 2017  
Samples Submitted: October 2, 2017  
Laboratory Reference: 1710-010  
Project: 4082-039-01

**ANALYTICAL REPORT FOR SAMPLES**

<b>Client ID</b>	<b>Laboratory ID</b>	<b>Matrix</b>	<b>Date Sampled</b>	<b>Date Received</b>	<b>Notes</b>
FL358-MW1-0-0.5	10-010-01	Soil	10-2-17	10-2-17	
FL358-MW1-0.5-1	10-010-02	Soil	10-2-17	10-2-17	
FL358-MW1-1.5-2.5	10-010-03	Soil	10-2-17	10-2-17	
FL358-MW1-5-6	10-010-04	Soil	10-2-17	10-2-17	
FL358-MW1-12-13	10-010-06	Soil	10-2-17	10-2-17	
FL358-MW1-19-20	10-010-08	Soil	10-2-17	10-2-17	
FL358-MW2-0-0.5	10-010-10	Soil	10-2-17	10-2-17	
FL358-MW2-0.5-1	10-010-11	Soil	10-2-17	10-2-17	
FL358-MW2-1.5-2.5	10-010-12	Soil	10-2-17	10-2-17	
FL358-MW2-9-10	10-010-14	Soil	10-2-17	10-2-17	
FL358-MW2-13-14	10-010-16	Soil	10-2-17	10-2-17	



Date of Report: October 12, 2017  
 Samples Submitted: October 2, 2017  
 Laboratory Reference: 1710-010  
 Project: 4082-039-01

**NWTPH-Gx**

Matrix: Soil  
 Units: mg/kg (ppm)

<b>Analyte</b>	<b>Result</b>	<b>PQL</b>	<b>Method</b>	<b>Date Prepared</b>	<b>Date Analyzed</b>	<b>Flags</b>
<b>Client ID:</b>	<b>FL358-MW1-1.5-2.5</b>					
Laboratory ID:	10-010-03					
Gasoline	<b>ND</b>	5.2	NWTPH-Gx	10-5-17	10-5-17	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Fluorobenzene</i>	96	63-124				
<b>Client ID:</b>	<b>FL358-MW1-5-6</b>					
Laboratory ID:	10-010-04					
Gasoline	<b>ND</b>	6.5	NWTPH-Gx	10-5-17	10-5-17	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Fluorobenzene</i>	98	63-124				



Date of Report: October 12, 2017  
 Samples Submitted: October 2, 2017  
 Laboratory Reference: 1710-010  
 Project: 4082-039-01

### NWTPH-Dx

Matrix: Soil  
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>FL358-MW1-1.5-2.5</b>					
Laboratory ID:	10-010-03					
Diesel Range Organics	<b>ND</b>	29	NWTPH-Dx	10-5-17	10-6-17	
Lube Oil Range Organics	<b>100</b>	58	NWTPH-Dx	10-5-17	10-6-17	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	87	50-150				
<b>Client ID:</b>	<b>FL358-MW1-5-6</b>					
Laboratory ID:	10-010-04					
Diesel Range Organics	<b>ND</b>	30	NWTPH-Dx	10-5-17	10-6-17	
Lube Oil	<b>79</b>	59	NWTPH-Dx	10-5-17	10-6-17	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	80	50-150				



Date of Report: October 12, 2017  
 Samples Submitted: October 2, 2017  
 Laboratory Reference: 1710-010  
 Project: 4082-039-01

**VOLATILES EPA 8260C**  
 Page 1 of 2

Matrix: Soil  
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>FL358-MW1-1.5-2.5</b>					
Laboratory ID:	10-010-03					
Dichlorodifluoromethane	ND	0.0020	EPA 8260C	10-6-17	10-6-17	
Chloromethane	ND	0.0049	EPA 8260C	10-6-17	10-6-17	
Vinyl Chloride	ND	0.00098	EPA 8260C	10-6-17	10-6-17	
Bromomethane	ND	0.0013	EPA 8260C	10-6-17	10-6-17	
Chloroethane	ND	0.0049	EPA 8260C	10-6-17	10-6-17	
Trichlorofluoromethane	ND	0.00098	EPA 8260C	10-6-17	10-6-17	
1,1-Dichloroethene	ND	0.00098	EPA 8260C	10-6-17	10-6-17	
Acetone	0.20	0.0098	EPA 8260C	10-6-17	10-6-17	
Iodomethane	ND	0.0049	EPA 8260C	10-6-17	10-6-17	
Carbon Disulfide	ND	0.0015	EPA 8260C	10-6-17	10-6-17	
Methylene Chloride	ND	0.0098	EPA 8260C	10-6-17	10-6-17	
(trans) 1,2-Dichloroethene	ND	0.00098	EPA 8260C	10-6-17	10-6-17	
Methyl t-Butyl Ether	ND	0.00098	EPA 8260C	10-6-17	10-6-17	
1,1-Dichloroethane	ND	0.00098	EPA 8260C	10-6-17	10-6-17	
Vinyl Acetate	ND	0.0049	EPA 8260C	10-6-17	10-6-17	
2,2-Dichloropropane	ND	0.00098	EPA 8260C	10-6-17	10-6-17	
(cis) 1,2-Dichloroethene	ND	0.00098	EPA 8260C	10-6-17	10-6-17	
2-Butanone	0.024	0.0049	EPA 8260C	10-6-17	10-6-17	
Bromochloromethane	ND	0.00098	EPA 8260C	10-6-17	10-6-17	
Chloroform	ND	0.00098	EPA 8260C	10-6-17	10-6-17	
1,1,1-Trichloroethane	ND	0.00098	EPA 8260C	10-6-17	10-6-17	
Carbon Tetrachloride	ND	0.00098	EPA 8260C	10-6-17	10-6-17	
1,1-Dichloropropene	ND	0.00098	EPA 8260C	10-6-17	10-6-17	
Benzene	ND	0.00098	EPA 8260C	10-6-17	10-6-17	
1,2-Dichloroethane	ND	0.00098	EPA 8260C	10-6-17	10-6-17	
Trichloroethene	ND	0.00098	EPA 8260C	10-6-17	10-6-17	
1,2-Dichloropropane	ND	0.00098	EPA 8260C	10-6-17	10-6-17	
Dibromomethane	ND	0.00098	EPA 8260C	10-6-17	10-6-17	
Bromodichloromethane	ND	0.00098	EPA 8260C	10-6-17	10-6-17	
2-Chloroethyl Vinyl Ether	ND	0.0049	EPA 8260C	10-6-17	10-6-17	
(cis) 1,3-Dichloropropene	ND	0.00098	EPA 8260C	10-6-17	10-6-17	
Methyl Isobutyl Ketone	ND	0.0049	EPA 8260C	10-6-17	10-6-17	
Toluene	ND	0.0049	EPA 8260C	10-6-17	10-6-17	
(trans) 1,3-Dichloropropene	ND	0.00098	EPA 8260C	10-6-17	10-6-17	



Date of Report: October 12, 2017  
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 Project: 4082-039-01

**VOLATILES EPA 8260C**  
 Page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>FL358-MW1-1.5-2.5</b>					
Laboratory ID:	10-010-03					
1,1,2-Trichloroethane	ND	0.00098	EPA 8260C	10-6-17	10-6-17	
Tetrachloroethene	ND	0.00098	EPA 8260C	10-6-17	10-6-17	
1,3-Dichloropropane	ND	0.00098	EPA 8260C	10-6-17	10-6-17	
2-Hexanone	ND	0.0049	EPA 8260C	10-6-17	10-6-17	
Dibromochloromethane	ND	0.00098	EPA 8260C	10-6-17	10-6-17	
1,2-Dibromoethane	ND	0.00098	EPA 8260C	10-6-17	10-6-17	
Chlorobenzene	ND	0.00098	EPA 8260C	10-6-17	10-6-17	
1,1,1,2-Tetrachloroethane	ND	0.00098	EPA 8260C	10-6-17	10-6-17	
Ethylbenzene	ND	0.00098	EPA 8260C	10-6-17	10-6-17	
m,p-Xylene	ND	0.0020	EPA 8260C	10-6-17	10-6-17	
o-Xylene	ND	0.00098	EPA 8260C	10-6-17	10-6-17	
Styrene	ND	0.00098	EPA 8260C	10-6-17	10-6-17	
Bromoform	ND	0.0049	EPA 8260C	10-6-17	10-6-17	
Isopropylbenzene	ND	0.00098	EPA 8260C	10-6-17	10-6-17	
Bromobenzene	ND	0.00098	EPA 8260C	10-6-17	10-6-17	
1,1,2,2-Tetrachloroethane	ND	0.00098	EPA 8260C	10-6-17	10-6-17	
1,2,3-Trichloropropane	ND	0.00098	EPA 8260C	10-6-17	10-6-17	
n-Propylbenzene	ND	0.00098	EPA 8260C	10-6-17	10-6-17	
2-Chlorotoluene	ND	0.00098	EPA 8260C	10-6-17	10-6-17	
4-Chlorotoluene	ND	0.00098	EPA 8260C	10-6-17	10-6-17	
1,3,5-Trimethylbenzene	ND	0.00098	EPA 8260C	10-6-17	10-6-17	
tert-Butylbenzene	ND	0.00098	EPA 8260C	10-6-17	10-6-17	
1,2,4-Trimethylbenzene	ND	0.00098	EPA 8260C	10-6-17	10-6-17	
sec-Butylbenzene	ND	0.00098	EPA 8260C	10-6-17	10-6-17	
1,3-Dichlorobenzene	ND	0.00098	EPA 8260C	10-6-17	10-6-17	
p-Isopropyltoluene	0.0028	0.00098	EPA 8260C	10-6-17	10-6-17	
1,4-Dichlorobenzene	ND	0.00098	EPA 8260C	10-6-17	10-6-17	
1,2-Dichlorobenzene	ND	0.00098	EPA 8260C	10-6-17	10-6-17	
n-Butylbenzene	ND	0.00098	EPA 8260C	10-6-17	10-6-17	
1,2-Dibromo-3-chloropropane	ND	0.0049	EPA 8260C	10-6-17	10-6-17	
1,2,4-Trichlorobenzene	ND	0.00098	EPA 8260C	10-6-17	10-6-17	
Hexachlorobutadiene	ND	0.0049	EPA 8260C	10-6-17	10-6-17	
Naphthalene	ND	0.00098	EPA 8260C	10-6-17	10-6-17	
1,2,3-Trichlorobenzene	ND	0.00098	EPA 8260C	10-6-17	10-6-17	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>105</i>	<i>73-134</i>				
<i>Toluene-d8</i>	<i>105</i>	<i>81-124</i>				
<i>4-Bromofluorobenzene</i>	<i>90</i>	<i>80-131</i>				



Date of Report: October 12, 2017  
 Samples Submitted: October 2, 2017  
 Laboratory Reference: 1710-010  
 Project: 4082-039-01

**VOLATILES EPA 8260C**  
 Page 1 of 2

Matrix: Soil  
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>FL358-MW1-5-6</b>					
Laboratory ID:	10-010-04					
Dichlorodifluoromethane	ND	0.0018	EPA 8260C	10-6-17	10-6-17	
Chloromethane	ND	0.0045	EPA 8260C	10-6-17	10-6-17	
Vinyl Chloride	ND	0.00091	EPA 8260C	10-6-17	10-6-17	
Bromomethane	ND	0.0012	EPA 8260C	10-6-17	10-6-17	
Chloroethane	ND	0.0045	EPA 8260C	10-6-17	10-6-17	
Trichlorofluoromethane	ND	0.00091	EPA 8260C	10-6-17	10-6-17	
1,1-Dichloroethene	ND	0.00091	EPA 8260C	10-6-17	10-6-17	
Acetone	0.34	0.0091	EPA 8260C	10-6-17	10-6-17	
Iodomethane	ND	0.0045	EPA 8260C	10-6-17	10-6-17	
Carbon Disulfide	0.0018	0.0014	EPA 8260C	10-6-17	10-6-17	Y
Methylene Chloride	ND	0.0091	EPA 8260C	10-6-17	10-6-17	
(trans) 1,2-Dichloroethene	ND	0.00091	EPA 8260C	10-6-17	10-6-17	
Methyl t-Butyl Ether	ND	0.00091	EPA 8260C	10-6-17	10-6-17	
1,1-Dichloroethane	ND	0.00091	EPA 8260C	10-6-17	10-6-17	
Vinyl Acetate	ND	0.0045	EPA 8260C	10-6-17	10-6-17	
2,2-Dichloropropane	ND	0.00091	EPA 8260C	10-6-17	10-6-17	
(cis) 1,2-Dichloroethene	ND	0.00091	EPA 8260C	10-6-17	10-6-17	
2-Butanone	0.039	0.0045	EPA 8260C	10-6-17	10-6-17	
Bromochloromethane	ND	0.00091	EPA 8260C	10-6-17	10-6-17	
Chloroform	ND	0.00091	EPA 8260C	10-6-17	10-6-17	
1,1,1-Trichloroethane	ND	0.00091	EPA 8260C	10-6-17	10-6-17	
Carbon Tetrachloride	ND	0.00091	EPA 8260C	10-6-17	10-6-17	
1,1-Dichloropropene	ND	0.00091	EPA 8260C	10-6-17	10-6-17	
Benzene	ND	0.00091	EPA 8260C	10-6-17	10-6-17	
1,2-Dichloroethane	ND	0.00091	EPA 8260C	10-6-17	10-6-17	
Trichloroethene	ND	0.00091	EPA 8260C	10-6-17	10-6-17	
1,2-Dichloropropane	ND	0.00091	EPA 8260C	10-6-17	10-6-17	
Dibromomethane	ND	0.00091	EPA 8260C	10-6-17	10-6-17	
Bromodichloromethane	ND	0.00091	EPA 8260C	10-6-17	10-6-17	
2-Chloroethyl Vinyl Ether	ND	0.0045	EPA 8260C	10-6-17	10-6-17	
(cis) 1,3-Dichloropropene	ND	0.00091	EPA 8260C	10-6-17	10-6-17	
Methyl Isobutyl Ketone	ND	0.0045	EPA 8260C	10-6-17	10-6-17	
Toluene	ND	0.0045	EPA 8260C	10-6-17	10-6-17	
(trans) 1,3-Dichloropropene	ND	0.00091	EPA 8260C	10-6-17	10-6-17	



Date of Report: October 12, 2017  
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 Project: 4082-039-01

**VOLATILES EPA 8260C**  
 Page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>FL358-MW1-5-6</b>					
Laboratory ID:	10-010-04					
1,1,2-Trichloroethane	ND	0.00091	EPA 8260C	10-6-17	10-6-17	
Tetrachloroethene	ND	0.00091	EPA 8260C	10-6-17	10-6-17	
1,3-Dichloropropane	ND	0.00091	EPA 8260C	10-6-17	10-6-17	
2-Hexanone	ND	0.0045	EPA 8260C	10-6-17	10-6-17	
Dibromochloromethane	ND	0.00091	EPA 8260C	10-6-17	10-6-17	
1,2-Dibromoethane	ND	0.00091	EPA 8260C	10-6-17	10-6-17	
Chlorobenzene	ND	0.00091	EPA 8260C	10-6-17	10-6-17	
1,1,1,2-Tetrachloroethane	ND	0.00091	EPA 8260C	10-6-17	10-6-17	
Ethylbenzene	ND	0.00091	EPA 8260C	10-6-17	10-6-17	
m,p-Xylene	ND	0.0018	EPA 8260C	10-6-17	10-6-17	
o-Xylene	ND	0.00091	EPA 8260C	10-6-17	10-6-17	
Styrene	ND	0.00091	EPA 8260C	10-6-17	10-6-17	
Bromoform	ND	0.0045	EPA 8260C	10-6-17	10-6-17	
Isopropylbenzene	ND	0.00091	EPA 8260C	10-6-17	10-6-17	
Bromobenzene	ND	0.00091	EPA 8260C	10-6-17	10-6-17	
1,1,2,2-Tetrachloroethane	ND	0.00091	EPA 8260C	10-6-17	10-6-17	
1,2,3-Trichloropropane	ND	0.00091	EPA 8260C	10-6-17	10-6-17	
n-Propylbenzene	ND	0.00091	EPA 8260C	10-6-17	10-6-17	
2-Chlorotoluene	ND	0.00091	EPA 8260C	10-6-17	10-6-17	
4-Chlorotoluene	ND	0.00091	EPA 8260C	10-6-17	10-6-17	
1,3,5-Trimethylbenzene	ND	0.00091	EPA 8260C	10-6-17	10-6-17	
tert-Butylbenzene	ND	0.00091	EPA 8260C	10-6-17	10-6-17	
1,2,4-Trimethylbenzene	ND	0.00091	EPA 8260C	10-6-17	10-6-17	
sec-Butylbenzene	ND	0.00091	EPA 8260C	10-6-17	10-6-17	
1,3-Dichlorobenzene	ND	0.00091	EPA 8260C	10-6-17	10-6-17	
p-Isopropyltoluene	0.017	0.00091	EPA 8260C	10-6-17	10-6-17	
1,4-Dichlorobenzene	ND	0.00091	EPA 8260C	10-6-17	10-6-17	
1,2-Dichlorobenzene	ND	0.00091	EPA 8260C	10-6-17	10-6-17	
n-Butylbenzene	ND	0.00091	EPA 8260C	10-6-17	10-6-17	
1,2-Dibromo-3-chloropropane	ND	0.0045	EPA 8260C	10-6-17	10-6-17	
1,2,4-Trichlorobenzene	ND	0.00091	EPA 8260C	10-6-17	10-6-17	
Hexachlorobutadiene	ND	0.0045	EPA 8260C	10-6-17	10-6-17	
Naphthalene	ND	0.00091	EPA 8260C	10-6-17	10-6-17	
1,2,3-Trichlorobenzene	ND	0.00091	EPA 8260C	10-6-17	10-6-17	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>102</i>	<i>73-134</i>				
<i>Toluene-d8</i>	<i>106</i>	<i>81-124</i>				
<i>4-Bromofluorobenzene</i>	<i>97</i>	<i>80-131</i>				



Date of Report: October 12, 2017  
 Samples Submitted: October 2, 2017  
 Laboratory Reference: 1710-010  
 Project: 4082-039-01

**VOLATILES EPA 8260C**  
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Matrix: Soil  
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>FL358-MW1-12-13</b>					
Laboratory ID:	10-010-06					
Dichlorodifluoromethane	ND	0.0020	EPA 8260C	10-6-17	10-6-17	
Chloromethane	ND	0.0049	EPA 8260C	10-6-17	10-6-17	
Vinyl Chloride	ND	0.00099	EPA 8260C	10-6-17	10-6-17	
Bromomethane	ND	0.0013	EPA 8260C	10-6-17	10-6-17	
Chloroethane	ND	0.0049	EPA 8260C	10-6-17	10-6-17	
Trichlorofluoromethane	ND	0.00099	EPA 8260C	10-6-17	10-6-17	
1,1-Dichloroethene	ND	0.00099	EPA 8260C	10-6-17	10-6-17	
Acetone	0.069	0.0099	EPA 8260C	10-6-17	10-6-17	
Iodomethane	ND	0.0049	EPA 8260C	10-6-17	10-6-17	
Carbon Disulfide	ND	0.0015	EPA 8260C	10-6-17	10-6-17	
Methylene Chloride	ND	0.0099	EPA 8260C	10-6-17	10-6-17	
(trans) 1,2-Dichloroethene	ND	0.00099	EPA 8260C	10-6-17	10-6-17	
Methyl t-Butyl Ether	ND	0.00099	EPA 8260C	10-6-17	10-6-17	
1,1-Dichloroethane	ND	0.00099	EPA 8260C	10-6-17	10-6-17	
Vinyl Acetate	ND	0.0049	EPA 8260C	10-6-17	10-6-17	
2,2-Dichloropropane	ND	0.00099	EPA 8260C	10-6-17	10-6-17	
(cis) 1,2-Dichloroethene	ND	0.00099	EPA 8260C	10-6-17	10-6-17	
2-Butanone	ND	0.0049	EPA 8260C	10-6-17	10-6-17	
Bromochloromethane	ND	0.00099	EPA 8260C	10-6-17	10-6-17	
Chloroform	ND	0.00099	EPA 8260C	10-6-17	10-6-17	
1,1,1-Trichloroethane	ND	0.00099	EPA 8260C	10-6-17	10-6-17	
Carbon Tetrachloride	ND	0.00099	EPA 8260C	10-6-17	10-6-17	
1,1-Dichloropropene	ND	0.00099	EPA 8260C	10-6-17	10-6-17	
Benzene	ND	0.00099	EPA 8260C	10-6-17	10-6-17	
1,2-Dichloroethane	ND	0.00099	EPA 8260C	10-6-17	10-6-17	
Trichloroethene	ND	0.00099	EPA 8260C	10-6-17	10-6-17	
1,2-Dichloropropane	ND	0.00099	EPA 8260C	10-6-17	10-6-17	
Dibromomethane	ND	0.00099	EPA 8260C	10-6-17	10-6-17	
Bromodichloromethane	ND	0.00099	EPA 8260C	10-6-17	10-6-17	
2-Chloroethyl Vinyl Ether	ND	0.0049	EPA 8260C	10-6-17	10-6-17	
(cis) 1,3-Dichloropropene	ND	0.00099	EPA 8260C	10-6-17	10-6-17	
Methyl Isobutyl Ketone	ND	0.0049	EPA 8260C	10-6-17	10-6-17	
Toluene	ND	0.0049	EPA 8260C	10-6-17	10-6-17	
(trans) 1,3-Dichloropropene	ND	0.00099	EPA 8260C	10-6-17	10-6-17	



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**VOLATILES EPA 8260C**  
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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>FL358-MW1-12-13</b>					
Laboratory ID:	10-010-06					
1,1,2-Trichloroethane	ND	0.00099	EPA 8260C	10-6-17	10-6-17	
Tetrachloroethene	ND	0.00099	EPA 8260C	10-6-17	10-6-17	
1,3-Dichloropropane	ND	0.00099	EPA 8260C	10-6-17	10-6-17	
2-Hexanone	ND	0.0049	EPA 8260C	10-6-17	10-6-17	
Dibromochloromethane	ND	0.00099	EPA 8260C	10-6-17	10-6-17	
1,2-Dibromoethane	ND	0.00099	EPA 8260C	10-6-17	10-6-17	
Chlorobenzene	ND	0.00099	EPA 8260C	10-6-17	10-6-17	
1,1,1,2-Tetrachloroethane	ND	0.00099	EPA 8260C	10-6-17	10-6-17	
Ethylbenzene	ND	0.00099	EPA 8260C	10-6-17	10-6-17	
m,p-Xylene	ND	0.0020	EPA 8260C	10-6-17	10-6-17	
o-Xylene	ND	0.00099	EPA 8260C	10-6-17	10-6-17	
Styrene	ND	0.00099	EPA 8260C	10-6-17	10-6-17	
Bromoform	ND	0.0049	EPA 8260C	10-6-17	10-6-17	
Isopropylbenzene	ND	0.00099	EPA 8260C	10-6-17	10-6-17	
Bromobenzene	ND	0.00099	EPA 8260C	10-6-17	10-6-17	
1,1,2,2-Tetrachloroethane	ND	0.00099	EPA 8260C	10-6-17	10-6-17	
1,2,3-Trichloropropane	ND	0.00099	EPA 8260C	10-6-17	10-6-17	
n-Propylbenzene	ND	0.00099	EPA 8260C	10-6-17	10-6-17	
2-Chlorotoluene	ND	0.00099	EPA 8260C	10-6-17	10-6-17	
4-Chlorotoluene	ND	0.00099	EPA 8260C	10-6-17	10-6-17	
1,3,5-Trimethylbenzene	ND	0.00099	EPA 8260C	10-6-17	10-6-17	
tert-Butylbenzene	ND	0.00099	EPA 8260C	10-6-17	10-6-17	
1,2,4-Trimethylbenzene	ND	0.00099	EPA 8260C	10-6-17	10-6-17	
sec-Butylbenzene	ND	0.00099	EPA 8260C	10-6-17	10-6-17	
1,3-Dichlorobenzene	ND	0.00099	EPA 8260C	10-6-17	10-6-17	
p-Isopropyltoluene	ND	0.00099	EPA 8260C	10-6-17	10-6-17	
1,4-Dichlorobenzene	ND	0.00099	EPA 8260C	10-6-17	10-6-17	
1,2-Dichlorobenzene	ND	0.00099	EPA 8260C	10-6-17	10-6-17	
n-Butylbenzene	ND	0.00099	EPA 8260C	10-6-17	10-6-17	
1,2-Dibromo-3-chloropropane	ND	0.0049	EPA 8260C	10-6-17	10-6-17	
1,2,4-Trichlorobenzene	ND	0.00099	EPA 8260C	10-6-17	10-6-17	
Hexachlorobutadiene	ND	0.0049	EPA 8260C	10-6-17	10-6-17	
Naphthalene	ND	0.00099	EPA 8260C	10-6-17	10-6-17	
1,2,3-Trichlorobenzene	ND	0.00099	EPA 8260C	10-6-17	10-6-17	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>102</i>	<i>73-134</i>				
<i>Toluene-d8</i>	<i>105</i>	<i>81-124</i>				
<i>4-Bromofluorobenzene</i>	<i>102</i>	<i>80-131</i>				



Date of Report: October 12, 2017  
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 Project: 4082-039-01

**VOLATILES EPA 8260C**

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Matrix: Soil  
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>FL358-MW1-19-20</b>					
Laboratory ID:	10-010-08					
Dichlorodifluoromethane	ND	0.0017	EPA 8260C	10-6-17	10-6-17	
Chloromethane	ND	0.0042	EPA 8260C	10-6-17	10-6-17	
Vinyl Chloride	ND	0.00084	EPA 8260C	10-6-17	10-6-17	
Bromomethane	ND	0.0011	EPA 8260C	10-6-17	10-6-17	
Chloroethane	ND	0.0042	EPA 8260C	10-6-17	10-6-17	
Trichlorofluoromethane	ND	0.00084	EPA 8260C	10-6-17	10-6-17	
1,1-Dichloroethene	ND	0.00084	EPA 8260C	10-6-17	10-6-17	
Acetone	0.014	0.0084	EPA 8260C	10-6-17	10-6-17	
Iodomethane	ND	0.0042	EPA 8260C	10-6-17	10-6-17	
Carbon Disulfide	ND	0.0013	EPA 8260C	10-6-17	10-6-17	
Methylene Chloride	ND	0.0084	EPA 8260C	10-6-17	10-6-17	
(trans) 1,2-Dichloroethene	ND	0.00084	EPA 8260C	10-6-17	10-6-17	
Methyl t-Butyl Ether	ND	0.00084	EPA 8260C	10-6-17	10-6-17	
1,1-Dichloroethane	ND	0.00084	EPA 8260C	10-6-17	10-6-17	
Vinyl Acetate	ND	0.0042	EPA 8260C	10-6-17	10-6-17	
2,2-Dichloropropane	ND	0.00084	EPA 8260C	10-6-17	10-6-17	
(cis) 1,2-Dichloroethene	0.0016	0.00084	EPA 8260C	10-6-17	10-6-17	
2-Butanone	ND	0.0042	EPA 8260C	10-6-17	10-6-17	
Bromochloromethane	ND	0.00084	EPA 8260C	10-6-17	10-6-17	
Chloroform	ND	0.00084	EPA 8260C	10-6-17	10-6-17	
1,1,1-Trichloroethane	ND	0.00084	EPA 8260C	10-6-17	10-6-17	
Carbon Tetrachloride	ND	0.00084	EPA 8260C	10-6-17	10-6-17	
1,1-Dichloropropene	ND	0.00084	EPA 8260C	10-6-17	10-6-17	
Benzene	ND	0.00084	EPA 8260C	10-6-17	10-6-17	
1,2-Dichloroethane	ND	0.00084	EPA 8260C	10-6-17	10-6-17	
Trichloroethene	0.0033	0.00084	EPA 8260C	10-6-17	10-6-17	
1,2-Dichloropropane	ND	0.00084	EPA 8260C	10-6-17	10-6-17	
Dibromomethane	ND	0.00084	EPA 8260C	10-6-17	10-6-17	
Bromodichloromethane	ND	0.00084	EPA 8260C	10-6-17	10-6-17	
2-Chloroethyl Vinyl Ether	ND	0.0042	EPA 8260C	10-6-17	10-6-17	
(cis) 1,3-Dichloropropene	ND	0.00084	EPA 8260C	10-6-17	10-6-17	
Methyl Isobutyl Ketone	ND	0.0042	EPA 8260C	10-6-17	10-6-17	
Toluene	ND	0.0042	EPA 8260C	10-6-17	10-6-17	
(trans) 1,3-Dichloropropene	ND	0.00084	EPA 8260C	10-6-17	10-6-17	



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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>FL358-MW1-19-20</b>					
Laboratory ID:	10-010-08					
1,1,2-Trichloroethane	ND	0.00084	EPA 8260C	10-6-17	10-6-17	
Tetrachloroethene	0.0049	0.00084	EPA 8260C	10-6-17	10-6-17	
1,3-Dichloropropane	ND	0.00084	EPA 8260C	10-6-17	10-6-17	
2-Hexanone	ND	0.0042	EPA 8260C	10-6-17	10-6-17	
Dibromochloromethane	ND	0.00084	EPA 8260C	10-6-17	10-6-17	
1,2-Dibromoethane	ND	0.00084	EPA 8260C	10-6-17	10-6-17	
Chlorobenzene	ND	0.00084	EPA 8260C	10-6-17	10-6-17	
1,1,1,2-Tetrachloroethane	ND	0.00084	EPA 8260C	10-6-17	10-6-17	
Ethylbenzene	ND	0.00084	EPA 8260C	10-6-17	10-6-17	
m,p-Xylene	ND	0.0017	EPA 8260C	10-6-17	10-6-17	
o-Xylene	ND	0.00084	EPA 8260C	10-6-17	10-6-17	
Styrene	ND	0.00084	EPA 8260C	10-6-17	10-6-17	
Bromoform	ND	0.0042	EPA 8260C	10-6-17	10-6-17	
Isopropylbenzene	ND	0.00084	EPA 8260C	10-6-17	10-6-17	
Bromobenzene	ND	0.00084	EPA 8260C	10-6-17	10-6-17	
1,1,2,2-Tetrachloroethane	ND	0.00084	EPA 8260C	10-6-17	10-6-17	
1,2,3-Trichloropropane	ND	0.00084	EPA 8260C	10-6-17	10-6-17	
n-Propylbenzene	ND	0.00084	EPA 8260C	10-6-17	10-6-17	
2-Chlorotoluene	ND	0.00084	EPA 8260C	10-6-17	10-6-17	
4-Chlorotoluene	ND	0.00084	EPA 8260C	10-6-17	10-6-17	
1,3,5-Trimethylbenzene	ND	0.00084	EPA 8260C	10-6-17	10-6-17	
tert-Butylbenzene	ND	0.00084	EPA 8260C	10-6-17	10-6-17	
1,2,4-Trimethylbenzene	ND	0.00084	EPA 8260C	10-6-17	10-6-17	
sec-Butylbenzene	ND	0.00084	EPA 8260C	10-6-17	10-6-17	
1,3-Dichlorobenzene	ND	0.00084	EPA 8260C	10-6-17	10-6-17	
p-Isopropyltoluene	ND	0.00084	EPA 8260C	10-6-17	10-6-17	
1,4-Dichlorobenzene	ND	0.00084	EPA 8260C	10-6-17	10-6-17	
1,2-Dichlorobenzene	ND	0.00084	EPA 8260C	10-6-17	10-6-17	
n-Butylbenzene	ND	0.00084	EPA 8260C	10-6-17	10-6-17	
1,2-Dibromo-3-chloropropane	ND	0.0042	EPA 8260C	10-6-17	10-6-17	
1,2,4-Trichlorobenzene	ND	0.00084	EPA 8260C	10-6-17	10-6-17	
Hexachlorobutadiene	ND	0.0042	EPA 8260C	10-6-17	10-6-17	
Naphthalene	ND	0.00084	EPA 8260C	10-6-17	10-6-17	
1,2,3-Trichlorobenzene	ND	0.00084	EPA 8260C	10-6-17	10-6-17	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>100</i>	<i>73-134</i>				
<i>Toluene-d8</i>	<i>103</i>	<i>81-124</i>				
<i>4-Bromofluorobenzene</i>	<i>102</i>	<i>80-131</i>				



Date of Report: October 12, 2017  
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 Laboratory Reference: 1710-010  
 Project: 4082-039-01

**VOLATILES EPA 8260C**  
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Matrix: Soil  
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>FL358-MW2-1.5-2.5</b>					
Laboratory ID:	10-010-12					
Dichlorodifluoromethane	ND	0.0021	EPA 8260C	10-6-17	10-6-17	
Chloromethane	ND	0.0053	EPA 8260C	10-6-17	10-6-17	
Vinyl Chloride	ND	0.0011	EPA 8260C	10-6-17	10-6-17	
Bromomethane	ND	0.0014	EPA 8260C	10-6-17	10-6-17	
Chloroethane	ND	0.0053	EPA 8260C	10-6-17	10-6-17	
Trichlorofluoromethane	ND	0.0011	EPA 8260C	10-6-17	10-6-17	
1,1-Dichloroethene	ND	0.0011	EPA 8260C	10-6-17	10-6-17	
Acetone	0.18	0.011	EPA 8260C	10-6-17	10-6-17	
Iodomethane	ND	0.0053	EPA 8260C	10-6-17	10-6-17	
Carbon Disulfide	ND	0.0016	EPA 8260C	10-6-17	10-6-17	
Methylene Chloride	ND	0.011	EPA 8260C	10-6-17	10-6-17	
(trans) 1,2-Dichloroethene	ND	0.0011	EPA 8260C	10-6-17	10-6-17	
Methyl t-Butyl Ether	ND	0.0011	EPA 8260C	10-6-17	10-6-17	
1,1-Dichloroethane	ND	0.0011	EPA 8260C	10-6-17	10-6-17	
Vinyl Acetate	ND	0.0053	EPA 8260C	10-6-17	10-6-17	
2,2-Dichloropropane	ND	0.0011	EPA 8260C	10-6-17	10-6-17	
(cis) 1,2-Dichloroethene	ND	0.0011	EPA 8260C	10-6-17	10-6-17	
2-Butanone	0.018	0.0053	EPA 8260C	10-6-17	10-6-17	
Bromochloromethane	ND	0.0011	EPA 8260C	10-6-17	10-6-17	
Chloroform	ND	0.0011	EPA 8260C	10-6-17	10-6-17	
1,1,1-Trichloroethane	ND	0.0011	EPA 8260C	10-6-17	10-6-17	
Carbon Tetrachloride	ND	0.0011	EPA 8260C	10-6-17	10-6-17	
1,1-Dichloropropene	ND	0.0011	EPA 8260C	10-6-17	10-6-17	
Benzene	ND	0.0011	EPA 8260C	10-6-17	10-6-17	
1,2-Dichloroethane	ND	0.0011	EPA 8260C	10-6-17	10-6-17	
Trichloroethene	ND	0.0011	EPA 8260C	10-6-17	10-6-17	
1,2-Dichloropropane	ND	0.0011	EPA 8260C	10-6-17	10-6-17	
Dibromomethane	ND	0.0011	EPA 8260C	10-6-17	10-6-17	
Bromodichloromethane	ND	0.0011	EPA 8260C	10-6-17	10-6-17	
2-Chloroethyl Vinyl Ether	ND	0.0053	EPA 8260C	10-6-17	10-6-17	
(cis) 1,3-Dichloropropene	ND	0.0011	EPA 8260C	10-6-17	10-6-17	
Methyl Isobutyl Ketone	ND	0.0053	EPA 8260C	10-6-17	10-6-17	
Toluene	ND	0.0053	EPA 8260C	10-6-17	10-6-17	
(trans) 1,3-Dichloropropene	ND	0.0011	EPA 8260C	10-6-17	10-6-17	



Date of Report: October 12, 2017  
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 Project: 4082-039-01

**VOLATILES EPA 8260C**  
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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>FL358-MW2-1.5-2.5</b>					
Laboratory ID:	10-010-12					
1,1,2-Trichloroethane	ND	0.0011	EPA 8260C	10-6-17	10-6-17	
Tetrachloroethene	ND	0.0011	EPA 8260C	10-6-17	10-6-17	
1,3-Dichloropropane	ND	0.0011	EPA 8260C	10-6-17	10-6-17	
2-Hexanone	ND	0.0053	EPA 8260C	10-6-17	10-6-17	
Dibromochloromethane	ND	0.0011	EPA 8260C	10-6-17	10-6-17	
1,2-Dibromoethane	ND	0.0011	EPA 8260C	10-6-17	10-6-17	
Chlorobenzene	ND	0.0011	EPA 8260C	10-6-17	10-6-17	
1,1,1,2-Tetrachloroethane	ND	0.0011	EPA 8260C	10-6-17	10-6-17	
Ethylbenzene	ND	0.0011	EPA 8260C	10-6-17	10-6-17	
m,p-Xylene	ND	0.0021	EPA 8260C	10-6-17	10-6-17	
o-Xylene	ND	0.0011	EPA 8260C	10-6-17	10-6-17	
Styrene	ND	0.0011	EPA 8260C	10-6-17	10-6-17	
Bromoform	ND	0.0053	EPA 8260C	10-6-17	10-6-17	
Isopropylbenzene	ND	0.0011	EPA 8260C	10-6-17	10-6-17	
Bromobenzene	ND	0.065	EPA 8260C	10-10-17	10-10-17	
1,1,2,2-Tetrachloroethane	ND	0.065	EPA 8260C	10-10-17	10-10-17	
1,2,3-Trichloropropane	ND	0.065	EPA 8260C	10-10-17	10-10-17	
n-Propylbenzene	ND	0.065	EPA 8260C	10-10-17	10-10-17	
2-Chlorotoluene	ND	0.065	EPA 8260C	10-10-17	10-10-17	
4-Chlorotoluene	ND	0.065	EPA 8260C	10-10-17	10-10-17	
1,3,5-Trimethylbenzene	ND	0.065	EPA 8260C	10-10-17	10-10-17	
tert-Butylbenzene	ND	0.065	EPA 8260C	10-10-17	10-10-17	
1,2,4-Trimethylbenzene	ND	0.065	EPA 8260C	10-10-17	10-10-17	
sec-Butylbenzene	ND	0.065	EPA 8260C	10-10-17	10-10-17	
1,3-Dichlorobenzene	ND	0.065	EPA 8260C	10-10-17	10-10-17	
p-Isopropyltoluene	ND	0.065	EPA 8260C	10-10-17	10-10-17	
1,4-Dichlorobenzene	ND	0.065	EPA 8260C	10-10-17	10-10-17	
1,2-Dichlorobenzene	ND	0.065	EPA 8260C	10-10-17	10-10-17	
n-Butylbenzene	ND	0.065	EPA 8260C	10-10-17	10-10-17	
1,2-Dibromo-3-chloropropane	ND	0.32	EPA 8260C	10-10-17	10-10-17	
1,2,4-Trichlorobenzene	ND	0.065	EPA 8260C	10-10-17	10-10-17	
Hexachlorobutadiene	ND	0.32	EPA 8260C	10-10-17	10-10-17	
Naphthalene	ND	0.065	EPA 8260C	10-10-17	10-10-17	
1,2,3-Trichlorobenzene	ND	0.065	EPA 8260C	10-10-17	10-10-17	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>101</i>	<i>73-134</i>				
<i>Toluene-d8</i>	<i>101</i>	<i>81-124</i>				
<i>4-Bromofluorobenzene</i>	<i>88</i>	<i>80-131</i>				



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**VOLATILES EPA 8260C**

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Matrix: Soil  
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>FL358-MW2-9-10</b>					
Laboratory ID:	10-010-14					
Dichlorodifluoromethane	ND	0.0017	EPA 8260C	10-6-17	10-6-17	
Chloromethane	ND	0.0044	EPA 8260C	10-6-17	10-6-17	
Vinyl Chloride	ND	0.00087	EPA 8260C	10-6-17	10-6-17	
Bromomethane	ND	0.0011	EPA 8260C	10-6-17	10-6-17	
Chloroethane	ND	0.0044	EPA 8260C	10-6-17	10-6-17	
Trichlorofluoromethane	ND	0.00087	EPA 8260C	10-6-17	10-6-17	
1,1-Dichloroethene	ND	0.00087	EPA 8260C	10-6-17	10-6-17	
Acetone	0.052	0.0087	EPA 8260C	10-6-17	10-6-17	
Iodomethane	ND	0.0044	EPA 8260C	10-6-17	10-6-17	
Carbon Disulfide	ND	0.0013	EPA 8260C	10-6-17	10-6-17	
Methylene Chloride	ND	0.0087	EPA 8260C	10-6-17	10-6-17	
(trans) 1,2-Dichloroethene	ND	0.00087	EPA 8260C	10-6-17	10-6-17	
Methyl t-Butyl Ether	ND	0.00087	EPA 8260C	10-6-17	10-6-17	
1,1-Dichloroethane	ND	0.00087	EPA 8260C	10-6-17	10-6-17	
Vinyl Acetate	ND	0.0044	EPA 8260C	10-6-17	10-6-17	
2,2-Dichloropropane	ND	0.00087	EPA 8260C	10-6-17	10-6-17	
(cis) 1,2-Dichloroethene	ND	0.00087	EPA 8260C	10-6-17	10-6-17	
2-Butanone	ND	0.0044	EPA 8260C	10-6-17	10-6-17	
Bromochloromethane	ND	0.00087	EPA 8260C	10-6-17	10-6-17	
Chloroform	ND	0.00087	EPA 8260C	10-6-17	10-6-17	
1,1,1-Trichloroethane	ND	0.00087	EPA 8260C	10-6-17	10-6-17	
Carbon Tetrachloride	ND	0.00087	EPA 8260C	10-6-17	10-6-17	
1,1-Dichloropropene	ND	0.00087	EPA 8260C	10-6-17	10-6-17	
Benzene	ND	0.00087	EPA 8260C	10-6-17	10-6-17	
1,2-Dichloroethane	ND	0.00087	EPA 8260C	10-6-17	10-6-17	
Trichloroethene	ND	0.00087	EPA 8260C	10-6-17	10-6-17	
1,2-Dichloropropane	ND	0.00087	EPA 8260C	10-6-17	10-6-17	
Dibromomethane	ND	0.00087	EPA 8260C	10-6-17	10-6-17	
Bromodichloromethane	ND	0.00087	EPA 8260C	10-6-17	10-6-17	
2-Chloroethyl Vinyl Ether	ND	0.0044	EPA 8260C	10-6-17	10-6-17	
(cis) 1,3-Dichloropropene	ND	0.00087	EPA 8260C	10-6-17	10-6-17	
Methyl Isobutyl Ketone	ND	0.0044	EPA 8260C	10-6-17	10-6-17	
Toluene	ND	0.0044	EPA 8260C	10-6-17	10-6-17	
(trans) 1,3-Dichloropropene	ND	0.00087	EPA 8260C	10-6-17	10-6-17	



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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>FL358-MW2-9-10</b>					
Laboratory ID:	10-010-14					
1,1,2-Trichloroethane	ND	0.00087	EPA 8260C	10-6-17	10-6-17	
Tetrachloroethene	ND	0.00087	EPA 8260C	10-6-17	10-6-17	
1,3-Dichloropropane	ND	0.00087	EPA 8260C	10-6-17	10-6-17	
2-Hexanone	ND	0.0044	EPA 8260C	10-6-17	10-6-17	
Dibromochloromethane	ND	0.00087	EPA 8260C	10-6-17	10-6-17	
1,2-Dibromoethane	ND	0.00087	EPA 8260C	10-6-17	10-6-17	
Chlorobenzene	ND	0.00087	EPA 8260C	10-6-17	10-6-17	
1,1,1,2-Tetrachloroethane	ND	0.00087	EPA 8260C	10-6-17	10-6-17	
Ethylbenzene	ND	0.00087	EPA 8260C	10-6-17	10-6-17	
m,p-Xylene	ND	0.0017	EPA 8260C	10-6-17	10-6-17	
o-Xylene	ND	0.00087	EPA 8260C	10-6-17	10-6-17	
Styrene	ND	0.00087	EPA 8260C	10-6-17	10-6-17	
Bromoform	ND	0.0044	EPA 8260C	10-6-17	10-6-17	
Isopropylbenzene	ND	0.00087	EPA 8260C	10-6-17	10-6-17	
Bromobenzene	ND	0.00087	EPA 8260C	10-6-17	10-6-17	
1,1,2,2-Tetrachloroethane	ND	0.00087	EPA 8260C	10-6-17	10-6-17	
1,2,3-Trichloropropane	ND	0.00087	EPA 8260C	10-6-17	10-6-17	
n-Propylbenzene	ND	0.00087	EPA 8260C	10-6-17	10-6-17	
2-Chlorotoluene	ND	0.00087	EPA 8260C	10-6-17	10-6-17	
4-Chlorotoluene	ND	0.00087	EPA 8260C	10-6-17	10-6-17	
1,3,5-Trimethylbenzene	ND	0.00087	EPA 8260C	10-6-17	10-6-17	
tert-Butylbenzene	ND	0.00087	EPA 8260C	10-6-17	10-6-17	
1,2,4-Trimethylbenzene	ND	0.00087	EPA 8260C	10-6-17	10-6-17	
sec-Butylbenzene	ND	0.00087	EPA 8260C	10-6-17	10-6-17	
1,3-Dichlorobenzene	ND	0.00087	EPA 8260C	10-6-17	10-6-17	
p-Isopropyltoluene	ND	0.00087	EPA 8260C	10-6-17	10-6-17	
1,4-Dichlorobenzene	ND	0.00087	EPA 8260C	10-6-17	10-6-17	
1,2-Dichlorobenzene	ND	0.00087	EPA 8260C	10-6-17	10-6-17	
n-Butylbenzene	ND	0.00087	EPA 8260C	10-6-17	10-6-17	
1,2-Dibromo-3-chloropropane	ND	0.0044	EPA 8260C	10-6-17	10-6-17	
1,2,4-Trichlorobenzene	ND	0.00087	EPA 8260C	10-6-17	10-6-17	
Hexachlorobutadiene	ND	0.0044	EPA 8260C	10-6-17	10-6-17	
Naphthalene	ND	0.00087	EPA 8260C	10-6-17	10-6-17	
1,2,3-Trichlorobenzene	ND	0.00087	EPA 8260C	10-6-17	10-6-17	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>102</i>	<i>73-134</i>				
<i>Toluene-d8</i>	<i>109</i>	<i>81-124</i>				
<i>4-Bromofluorobenzene</i>	<i>101</i>	<i>80-131</i>				



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**VOLATILES EPA 8260C**

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Matrix: Soil  
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>FL358-MW2-13-14</b>					
Laboratory ID:	10-010-16					
Dichlorodifluoromethane	ND	0.0018	EPA 8260C	10-6-17	10-6-17	
Chloromethane	ND	0.0044	EPA 8260C	10-6-17	10-6-17	
Vinyl Chloride	ND	0.00088	EPA 8260C	10-6-17	10-6-17	
Bromomethane	ND	0.0011	EPA 8260C	10-6-17	10-6-17	
Chloroethane	ND	0.0044	EPA 8260C	10-6-17	10-6-17	
Trichlorofluoromethane	ND	0.00088	EPA 8260C	10-6-17	10-6-17	
1,1-Dichloroethene	ND	0.00088	EPA 8260C	10-6-17	10-6-17	
Acetone	0.018	0.0088	EPA 8260C	10-6-17	10-6-17	
Iodomethane	ND	0.0044	EPA 8260C	10-6-17	10-6-17	
Carbon Disulfide	ND	0.0013	EPA 8260C	10-6-17	10-6-17	
Methylene Chloride	ND	0.0088	EPA 8260C	10-6-17	10-6-17	
(trans) 1,2-Dichloroethene	ND	0.00088	EPA 8260C	10-6-17	10-6-17	
Methyl t-Butyl Ether	ND	0.00088	EPA 8260C	10-6-17	10-6-17	
1,1-Dichloroethane	ND	0.00088	EPA 8260C	10-6-17	10-6-17	
Vinyl Acetate	ND	0.0044	EPA 8260C	10-6-17	10-6-17	
2,2-Dichloropropane	ND	0.00088	EPA 8260C	10-6-17	10-6-17	
(cis) 1,2-Dichloroethene	ND	0.00088	EPA 8260C	10-6-17	10-6-17	
2-Butanone	ND	0.0044	EPA 8260C	10-6-17	10-6-17	
Bromochloromethane	ND	0.00088	EPA 8260C	10-6-17	10-6-17	
Chloroform	ND	0.00088	EPA 8260C	10-6-17	10-6-17	
1,1,1-Trichloroethane	ND	0.00088	EPA 8260C	10-6-17	10-6-17	
Carbon Tetrachloride	ND	0.00088	EPA 8260C	10-6-17	10-6-17	
1,1-Dichloropropene	ND	0.00088	EPA 8260C	10-6-17	10-6-17	
Benzene	ND	0.00088	EPA 8260C	10-6-17	10-6-17	
1,2-Dichloroethane	ND	0.00088	EPA 8260C	10-6-17	10-6-17	
Trichloroethene	ND	0.00088	EPA 8260C	10-6-17	10-6-17	
1,2-Dichloropropane	ND	0.00088	EPA 8260C	10-6-17	10-6-17	
Dibromomethane	ND	0.00088	EPA 8260C	10-6-17	10-6-17	
Bromodichloromethane	ND	0.00088	EPA 8260C	10-6-17	10-6-17	
2-Chloroethyl Vinyl Ether	ND	0.0044	EPA 8260C	10-6-17	10-6-17	
(cis) 1,3-Dichloropropene	ND	0.00088	EPA 8260C	10-6-17	10-6-17	
Methyl Isobutyl Ketone	ND	0.0044	EPA 8260C	10-6-17	10-6-17	
Toluene	ND	0.0044	EPA 8260C	10-6-17	10-6-17	
(trans) 1,3-Dichloropropene	ND	0.00088	EPA 8260C	10-6-17	10-6-17	



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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>FL358-MW2-13-14</b>					
Laboratory ID:	10-010-16					
1,1,2-Trichloroethane	ND	0.00088	EPA 8260C	10-6-17	10-6-17	
Tetrachloroethene	ND	0.00088	EPA 8260C	10-6-17	10-6-17	
1,3-Dichloropropane	ND	0.00088	EPA 8260C	10-6-17	10-6-17	
2-Hexanone	ND	0.0044	EPA 8260C	10-6-17	10-6-17	
Dibromochloromethane	ND	0.00088	EPA 8260C	10-6-17	10-6-17	
1,2-Dibromoethane	ND	0.00088	EPA 8260C	10-6-17	10-6-17	
Chlorobenzene	ND	0.00088	EPA 8260C	10-6-17	10-6-17	
1,1,1,2-Tetrachloroethane	ND	0.00088	EPA 8260C	10-6-17	10-6-17	
Ethylbenzene	ND	0.00088	EPA 8260C	10-6-17	10-6-17	
m,p-Xylene	ND	0.0018	EPA 8260C	10-6-17	10-6-17	
o-Xylene	ND	0.00088	EPA 8260C	10-6-17	10-6-17	
Styrene	ND	0.00088	EPA 8260C	10-6-17	10-6-17	
Bromoform	ND	0.0044	EPA 8260C	10-6-17	10-6-17	
Isopropylbenzene	ND	0.00088	EPA 8260C	10-6-17	10-6-17	
Bromobenzene	ND	0.00088	EPA 8260C	10-6-17	10-6-17	
1,1,2,2-Tetrachloroethane	ND	0.00088	EPA 8260C	10-6-17	10-6-17	
1,2,3-Trichloropropane	ND	0.00088	EPA 8260C	10-6-17	10-6-17	
n-Propylbenzene	ND	0.00088	EPA 8260C	10-6-17	10-6-17	
2-Chlorotoluene	ND	0.00088	EPA 8260C	10-6-17	10-6-17	
4-Chlorotoluene	ND	0.00088	EPA 8260C	10-6-17	10-6-17	
1,3,5-Trimethylbenzene	ND	0.00088	EPA 8260C	10-6-17	10-6-17	
tert-Butylbenzene	ND	0.00088	EPA 8260C	10-6-17	10-6-17	
1,2,4-Trimethylbenzene	ND	0.00088	EPA 8260C	10-6-17	10-6-17	
sec-Butylbenzene	ND	0.00088	EPA 8260C	10-6-17	10-6-17	
1,3-Dichlorobenzene	ND	0.00088	EPA 8260C	10-6-17	10-6-17	
p-Isopropyltoluene	ND	0.00088	EPA 8260C	10-6-17	10-6-17	
1,4-Dichlorobenzene	ND	0.00088	EPA 8260C	10-6-17	10-6-17	
1,2-Dichlorobenzene	ND	0.00088	EPA 8260C	10-6-17	10-6-17	
n-Butylbenzene	ND	0.00088	EPA 8260C	10-6-17	10-6-17	
1,2-Dibromo-3-chloropropane	ND	0.0044	EPA 8260C	10-6-17	10-6-17	
1,2,4-Trichlorobenzene	ND	0.00088	EPA 8260C	10-6-17	10-6-17	
Hexachlorobutadiene	ND	0.0044	EPA 8260C	10-6-17	10-6-17	
Naphthalene	ND	0.00088	EPA 8260C	10-6-17	10-6-17	
1,2,3-Trichlorobenzene	ND	0.00088	EPA 8260C	10-6-17	10-6-17	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>94</i>	<i>73-134</i>				
<i>Toluene-d8</i>	<i>101</i>	<i>81-124</i>				
<i>4-Bromofluorobenzene</i>	<i>102</i>	<i>80-131</i>				



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**TOTAL METALS  
 EPA 6010C/6020A**

Matrix: Soil  
 Units: mg/kg (ppm)

<b>Analyte</b>	<b>Result</b>	<b>PQL</b>	<b>EPA Method</b>	<b>Date Prepared</b>	<b>Date Analyzed</b>	<b>Flags</b>
Lab ID: 10-010-01						
<b>Client ID: FL358-MW1-0-0.5</b>						
Arsenic	ND	2.9	6020A	10-6-17	10-10-17	
Lead	ND	5.8	6010C	10-6-17	10-6-17	
Lab ID: 10-010-02						
<b>Client ID: FL358-MW1-0.5-1</b>						
Arsenic	ND	2.8	6020A	10-6-17	10-10-17	
Lead	ND	5.7	6010C	10-6-17	10-6-17	
Lab ID: 10-010-10						
<b>Client ID: FL358-MW2-0-0.5</b>						
Arsenic	ND	2.8	6020A	10-6-17	10-10-17	
Lead	ND	5.6	6010C	10-6-17	10-6-17	
Lab ID: 10-010-11						
<b>Client ID: FL358-MW2-0.5-1</b>						
Arsenic	ND	2.8	6020A	10-6-17	10-10-17	
Lead	ND	5.5	6010C	10-6-17	10-6-17	



Date of Report: October 12, 2017  
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**NWTPH-Gx  
 QUALITY CONTROL**

Matrix: Soil  
 Units: mg/kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>METHOD BLANK</b>						
Laboratory ID:	MB1005S1					
Gasoline	<b>ND</b>	5.0	NWTPH-Gx	10-5-17	10-5-17	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Fluorobenzene</i>	93	63-124				

Analyte	Result	Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
<b>DUPLICATE</b>								
Laboratory ID:	10-010-03							
	ORIG	DUP						
Gasoline	<b>ND</b>	<b>ND</b>	NA	NA	NA	NA	NA	30
<i>Surrogate:</i>								
<i>Fluorobenzene</i>				95	96	63-124		



Date of Report: October 12, 2017  
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**NWTPH-Dx  
 QUALITY CONTROL**

Matrix: Soil  
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>METHOD BLANK</b>						
Laboratory ID:	MB1005S1					
Diesel Range Organics	<b>ND</b>	25	NWTPH-Dx	10-5-17	10-5-17	
Lube Oil Range Organics	<b>ND</b>	50	NWTPH-Dx	10-5-17	10-5-17	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	89	50-150				

Analyte	Result	Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
<b>DUPLICATE</b>								
Laboratory ID:	10-008-01							
	ORIG	DUP						
Diesel Fuel #2	<b>28500</b>	<b>21200</b>	NA	NA	NA	NA	29	NA
Lube Oil Range	<b>ND</b>	<b>ND</b>	NA	NA	NA	NA	NA	U1
<i>Surrogate:</i>								
<i>o-Terphenyl</i>				---	---	50-150		S,S



Date of Report: October 12, 2017  
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**VOLATILES EPA 8260C**  
**METHOD BLANK QUALITY CONTROL**

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Matrix: Soil  
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB1006S2					
Dichlorodifluoromethane	ND	0.0020	EPA 8260C	10-6-17	10-6-17	
Chloromethane	ND	0.0050	EPA 8260C	10-6-17	10-6-17	
Vinyl Chloride	ND	0.0010	EPA 8260C	10-6-17	10-6-17	
Bromomethane	ND	0.0013	EPA 8260C	10-6-17	10-6-17	
Chloroethane	ND	0.0050	EPA 8260C	10-6-17	10-6-17	
Trichlorofluoromethane	ND	0.0010	EPA 8260C	10-6-17	10-6-17	
1,1-Dichloroethene	ND	0.0010	EPA 8260C	10-6-17	10-6-17	
Acetone	ND	0.010	EPA 8260C	10-6-17	10-6-17	
Iodomethane	ND	0.0050	EPA 8260C	10-6-17	10-6-17	
Carbon Disulfide	ND	0.0015	EPA 8260C	10-6-17	10-6-17	
Methylene Chloride	ND	0.010	EPA 8260C	10-6-17	10-6-17	
(trans) 1,2-Dichloroethene	ND	0.0010	EPA 8260C	10-6-17	10-6-17	
Methyl t-Butyl Ether	ND	0.0010	EPA 8260C	10-6-17	10-6-17	
1,1-Dichloroethane	ND	0.0010	EPA 8260C	10-6-17	10-6-17	
Vinyl Acetate	ND	0.0050	EPA 8260C	10-6-17	10-6-17	
2,2-Dichloropropane	ND	0.0010	EPA 8260C	10-6-17	10-6-17	
(cis) 1,2-Dichloroethene	ND	0.0010	EPA 8260C	10-6-17	10-6-17	
2-Butanone	ND	0.0050	EPA 8260C	10-6-17	10-6-17	
Bromochloromethane	ND	0.0010	EPA 8260C	10-6-17	10-6-17	
Chloroform	ND	0.0010	EPA 8260C	10-6-17	10-6-17	
1,1,1-Trichloroethane	ND	0.0010	EPA 8260C	10-6-17	10-6-17	
Carbon Tetrachloride	ND	0.0010	EPA 8260C	10-6-17	10-6-17	
1,1-Dichloropropene	ND	0.0010	EPA 8260C	10-6-17	10-6-17	
Benzene	ND	0.0010	EPA 8260C	10-6-17	10-6-17	
1,2-Dichloroethane	ND	0.0010	EPA 8260C	10-6-17	10-6-17	
Trichloroethene	ND	0.0010	EPA 8260C	10-6-17	10-6-17	
1,2-Dichloropropane	ND	0.0010	EPA 8260C	10-6-17	10-6-17	
Dibromomethane	ND	0.0010	EPA 8260C	10-6-17	10-6-17	
Bromodichloromethane	ND	0.0010	EPA 8260C	10-6-17	10-6-17	
2-Chloroethyl Vinyl Ether	ND	0.0050	EPA 8260C	10-6-17	10-6-17	
(cis) 1,3-Dichloropropene	ND	0.0010	EPA 8260C	10-6-17	10-6-17	
Methyl Isobutyl Ketone	ND	0.0050	EPA 8260C	10-6-17	10-6-17	
Toluene	ND	0.0050	EPA 8260C	10-6-17	10-6-17	
(trans) 1,3-Dichloropropene	ND	0.0010	EPA 8260C	10-6-17	10-6-17	



Date of Report: October 12, 2017  
 Samples Submitted: October 2, 2017  
 Laboratory Reference: 1710-010  
 Project: 4082-039-01

**VOLATILES EPA 8260C**  
**METHOD BLANK QUALITY CONTROL**  
 Page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB1006S2					
1,1,2-Trichloroethane	ND	0.0010	EPA 8260C	10-6-17	10-6-17	
Tetrachloroethene	ND	0.0010	EPA 8260C	10-6-17	10-6-17	
1,3-Dichloropropane	ND	0.0010	EPA 8260C	10-6-17	10-6-17	
2-Hexanone	ND	0.0050	EPA 8260C	10-6-17	10-6-17	
Dibromochloromethane	ND	0.0010	EPA 8260C	10-6-17	10-6-17	
1,2-Dibromoethane	ND	0.0010	EPA 8260C	10-6-17	10-6-17	
Chlorobenzene	ND	0.0010	EPA 8260C	10-6-17	10-6-17	
1,1,1,2-Tetrachloroethane	ND	0.0010	EPA 8260C	10-6-17	10-6-17	
Ethylbenzene	ND	0.0010	EPA 8260C	10-6-17	10-6-17	
m,p-Xylene	ND	0.0020	EPA 8260C	10-6-17	10-6-17	
o-Xylene	ND	0.0010	EPA 8260C	10-6-17	10-6-17	
Styrene	ND	0.0010	EPA 8260C	10-6-17	10-6-17	
Bromoform	ND	0.0050	EPA 8260C	10-6-17	10-6-17	
Isopropylbenzene	ND	0.0010	EPA 8260C	10-6-17	10-6-17	
Bromobenzene	ND	0.0010	EPA 8260C	10-6-17	10-6-17	
1,1,2,2-Tetrachloroethane	ND	0.0010	EPA 8260C	10-6-17	10-6-17	
1,2,3-Trichloropropane	ND	0.0010	EPA 8260C	10-6-17	10-6-17	
n-Propylbenzene	ND	0.0010	EPA 8260C	10-6-17	10-6-17	
2-Chlorotoluene	ND	0.0010	EPA 8260C	10-6-17	10-6-17	
4-Chlorotoluene	ND	0.0010	EPA 8260C	10-6-17	10-6-17	
1,3,5-Trimethylbenzene	ND	0.0010	EPA 8260C	10-6-17	10-6-17	
tert-Butylbenzene	ND	0.0010	EPA 8260C	10-6-17	10-6-17	
1,2,4-Trimethylbenzene	ND	0.0010	EPA 8260C	10-6-17	10-6-17	
sec-Butylbenzene	ND	0.0010	EPA 8260C	10-6-17	10-6-17	
1,3-Dichlorobenzene	ND	0.0010	EPA 8260C	10-6-17	10-6-17	
p-Isopropyltoluene	ND	0.0010	EPA 8260C	10-6-17	10-6-17	
1,4-Dichlorobenzene	ND	0.0010	EPA 8260C	10-6-17	10-6-17	
1,2-Dichlorobenzene	ND	0.0010	EPA 8260C	10-6-17	10-6-17	
n-Butylbenzene	ND	0.0010	EPA 8260C	10-6-17	10-6-17	
1,2-Dibromo-3-chloropropane	ND	0.0050	EPA 8260C	10-6-17	10-6-17	
1,2,4-Trichlorobenzene	ND	0.0010	EPA 8260C	10-6-17	10-6-17	
Hexachlorobutadiene	ND	0.0050	EPA 8260C	10-6-17	10-6-17	
Naphthalene	ND	0.0010	EPA 8260C	10-6-17	10-6-17	
1,2,3-Trichlorobenzene	ND	0.0010	EPA 8260C	10-6-17	10-6-17	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>101</i>	<i>73-134</i>				
<i>Toluene-d8</i>	<i>106</i>	<i>81-124</i>				
<i>4-Bromofluorobenzene</i>	<i>103</i>	<i>80-131</i>				



Date of Report: October 12, 2017  
 Samples Submitted: October 2, 2017  
 Laboratory Reference: 1710-010  
 Project: 4082-039-01

**VOLATILES EPA 8260C  
 METHOD BLANK QUALITY CONTROL**

Page 1 of 2

Matrix: Soil  
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB1010S1					
Dichlorodifluoromethane	ND	0.0022	EPA 8260C	10-10-17	10-10-17	
Chloromethane	ND	0.0065	EPA 8260C	10-10-17	10-10-17	
Vinyl Chloride	ND	0.0010	EPA 8260C	10-10-17	10-10-17	
Bromomethane	ND	0.0010	EPA 8260C	10-10-17	10-10-17	
Chloroethane	ND	0.0050	EPA 8260C	10-10-17	10-10-17	
Trichlorofluoromethane	ND	0.0010	EPA 8260C	10-10-17	10-10-17	
1,1-Dichloroethene	ND	0.0010	EPA 8260C	10-10-17	10-10-17	
Acetone	ND	0.010	EPA 8260C	10-10-17	10-10-17	
Iodomethane	ND	0.0069	EPA 8260C	10-10-17	10-10-17	
Carbon Disulfide	ND	0.0010	EPA 8260C	10-10-17	10-10-17	
Methylene Chloride	ND	0.010	EPA 8260C	10-10-17	10-10-17	
(trans) 1,2-Dichloroethene	ND	0.0010	EPA 8260C	10-10-17	10-10-17	
Methyl t-Butyl Ether	ND	0.0010	EPA 8260C	10-10-17	10-10-17	
1,1-Dichloroethane	ND	0.0010	EPA 8260C	10-10-17	10-10-17	
Vinyl Acetate	ND	0.0050	EPA 8260C	10-10-17	10-10-17	
2,2-Dichloropropane	ND	0.0010	EPA 8260C	10-10-17	10-10-17	
(cis) 1,2-Dichloroethene	ND	0.0010	EPA 8260C	10-10-17	10-10-17	
2-Butanone	ND	0.0050	EPA 8260C	10-10-17	10-10-17	
Bromochloromethane	ND	0.0010	EPA 8260C	10-10-17	10-10-17	
Chloroform	ND	0.0010	EPA 8260C	10-10-17	10-10-17	
1,1,1-Trichloroethane	ND	0.0010	EPA 8260C	10-10-17	10-10-17	
Carbon Tetrachloride	ND	0.0010	EPA 8260C	10-10-17	10-10-17	
1,1-Dichloropropene	ND	0.0010	EPA 8260C	10-10-17	10-10-17	
Benzene	ND	0.0010	EPA 8260C	10-10-17	10-10-17	
1,2-Dichloroethane	ND	0.0010	EPA 8260C	10-10-17	10-10-17	
Trichloroethene	ND	0.0010	EPA 8260C	10-10-17	10-10-17	
1,2-Dichloropropane	ND	0.0010	EPA 8260C	10-10-17	10-10-17	
Dibromomethane	ND	0.0010	EPA 8260C	10-10-17	10-10-17	
Bromodichloromethane	ND	0.0010	EPA 8260C	10-10-17	10-10-17	
2-Chloroethyl Vinyl Ether	ND	0.0050	EPA 8260C	10-10-17	10-10-17	
(cis) 1,3-Dichloropropene	ND	0.0010	EPA 8260C	10-10-17	10-10-17	
Methyl Isobutyl Ketone	ND	0.0050	EPA 8260C	10-10-17	10-10-17	
Toluene	ND	0.0050	EPA 8260C	10-10-17	10-10-17	
(trans) 1,3-Dichloropropene	ND	0.0010	EPA 8260C	10-10-17	10-10-17	



Date of Report: October 12, 2017  
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 Project: 4082-039-01

**VOLATILES EPA 8260C**  
**METHOD BLANK QUALITY CONTROL**  
 Page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:		MB1010S1				
1,1,2-Trichloroethane	ND	0.0010	EPA 8260C	10-10-17	10-10-17	
Tetrachloroethene	ND	0.0010	EPA 8260C	10-10-17	10-10-17	
1,3-Dichloropropane	ND	0.0010	EPA 8260C	10-10-17	10-10-17	
2-Hexanone	ND	0.0050	EPA 8260C	10-10-17	10-10-17	
Dibromochloromethane	ND	0.0010	EPA 8260C	10-10-17	10-10-17	
1,2-Dibromoethane	ND	0.0010	EPA 8260C	10-10-17	10-10-17	
Chlorobenzene	ND	0.0010	EPA 8260C	10-10-17	10-10-17	
1,1,1,2-Tetrachloroethane	ND	0.0010	EPA 8260C	10-10-17	10-10-17	
Ethylbenzene	ND	0.0010	EPA 8260C	10-10-17	10-10-17	
m,p-Xylene	ND	0.0020	EPA 8260C	10-10-17	10-10-17	
o-Xylene	ND	0.0010	EPA 8260C	10-10-17	10-10-17	
Styrene	ND	0.0010	EPA 8260C	10-10-17	10-10-17	
Bromoform	ND	0.0050	EPA 8260C	10-10-17	10-10-17	
Isopropylbenzene	ND	0.0010	EPA 8260C	10-10-17	10-10-17	
Bromobenzene	ND	0.0010	EPA 8260C	10-10-17	10-10-17	
1,1,2,2-Tetrachloroethane	ND	0.0010	EPA 8260C	10-10-17	10-10-17	
1,2,3-Trichloropropane	ND	0.0010	EPA 8260C	10-10-17	10-10-17	
n-Propylbenzene	ND	0.0010	EPA 8260C	10-10-17	10-10-17	
2-Chlorotoluene	ND	0.0010	EPA 8260C	10-10-17	10-10-17	
4-Chlorotoluene	ND	0.0010	EPA 8260C	10-10-17	10-10-17	
1,3,5-Trimethylbenzene	ND	0.0010	EPA 8260C	10-10-17	10-10-17	
tert-Butylbenzene	ND	0.0010	EPA 8260C	10-10-17	10-10-17	
1,2,4-Trimethylbenzene	ND	0.0010	EPA 8260C	10-10-17	10-10-17	
sec-Butylbenzene	ND	0.0010	EPA 8260C	10-10-17	10-10-17	
1,3-Dichlorobenzene	ND	0.0010	EPA 8260C	10-10-17	10-10-17	
p-Isopropyltoluene	ND	0.0010	EPA 8260C	10-10-17	10-10-17	
1,4-Dichlorobenzene	ND	0.0010	EPA 8260C	10-10-17	10-10-17	
1,2-Dichlorobenzene	ND	0.0010	EPA 8260C	10-10-17	10-10-17	
n-Butylbenzene	ND	0.0010	EPA 8260C	10-10-17	10-10-17	
1,2-Dibromo-3-chloropropane	ND	0.0050	EPA 8260C	10-10-17	10-10-17	
1,2,4-Trichlorobenzene	ND	0.0010	EPA 8260C	10-10-17	10-10-17	
Hexachlorobutadiene	ND	0.0050	EPA 8260C	10-10-17	10-10-17	
Naphthalene	ND	0.0010	EPA 8260C	10-10-17	10-10-17	
1,2,3-Trichlorobenzene	ND	0.0010	EPA 8260C	10-10-17	10-10-17	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>90</i>	<i>73-134</i>				
<i>Toluene-d8</i>	<i>95</i>	<i>81-124</i>				
<i>4-Bromofluorobenzene</i>	<i>104</i>	<i>80-131</i>				



Date of Report: October 12, 2017  
 Samples Submitted: October 2, 2017  
 Laboratory Reference: 1710-010  
 Project: 4082-039-01

**VOLATILES EPA 8260C  
 SB/SBD QUALITY CONTROL**

Matrix: Soil  
 Units: mg/kg

Analyte	Result		Spike Level		Percent Recovery		Recovery	RPD		Flags
					Recovery	Limits	RPD	Limit		
<b>SPIKE BLANKS</b>										
Laboratory ID:	SB1006S2									
	SB	SBD	SB	SBD	SB	SBD				
1,1-Dichloroethene	<b>0.0437</b>	<b>0.0443</b>	0.0500	0.0500	87	89	66-127	1	15	
Benzene	<b>0.0447</b>	<b>0.0469</b>	0.0500	0.0500	89	94	76-122	5	15	
Trichloroethene	<b>0.0415</b>	<b>0.0407</b>	0.0500	0.0500	83	81	78-120	2	15	
Toluene	<b>0.0441</b>	<b>0.0453</b>	0.0500	0.0500	88	91	83-120	3	15	
Chlorobenzene	<b>0.0475</b>	<b>0.0494</b>	0.0500	0.0500	95	99	81-120	4	15	
<i>Surrogate:</i>										
Dibromofluoromethane					103	99	73-134			
Toluene-d8					104	98	81-124			
4-Bromofluorobenzene					102	100	80-131			



Date of Report: October 12, 2017  
 Samples Submitted: October 2, 2017  
 Laboratory Reference: 1710-010  
 Project: 4082-039-01

**VOLATILES EPA 8260C  
 SB/SBD QUALITY CONTROL**

Matrix: Soil  
 Units: mg/kg

Analyte	Result		Spike Level		Percent Recovery		Recovery	RPD		Flags
					Recovery	Limits	RPD	Limit		
<b>SPIKE BLANKS</b>										
Laboratory ID:	SB1010S1									
	SB	SBD	SB	SBD	SB	SBD				
1,1-Dichloroethene	<b>0.0526</b>	<b>0.0526</b>	0.0500	0.0500	105	105	66-127	0	15	
Benzene	<b>0.0574</b>	<b>0.0577</b>	0.0500	0.0500	115	115	76-122	1	15	
Trichloroethene	<b>0.0393</b>	<b>0.0392</b>	0.0500	0.0500	79	78	78-120	0	15	
Toluene	<b>0.0536</b>	<b>0.0521</b>	0.0500	0.0500	107	104	83-120	3	15	
Chlorobenzene	<b>0.0464</b>	<b>0.0460</b>	0.0500	0.0500	93	92	81-120	1	15	
<i>Surrogate:</i>										
<i>Dibromofluoromethane</i>					85	91	73-134			
<i>Toluene-d8</i>					95	96	81-124			
<i>4-Bromofluorobenzene</i>					103	103	80-131			



Date of Report: October 12, 2017  
Samples Submitted: October 2, 2017  
Laboratory Reference: 1710-010  
Project: 4082-039-01

**TOTAL METALS  
EPA 6010C/6020A  
METHOD BLANK QUALITY CONTROL**

Date Extracted: 10-6-17  
Date Analyzed: 10-6&10-17  
  
Matrix: Soil  
Units: mg/kg (ppm)  
  
Lab ID: MB1006SM1

Analyte	Method	Result	PQL
Arsenic	6020A	<b>ND</b>	2.5
Lead	6010C	<b>ND</b>	5.0



Date of Report: October 12, 2017  
 Samples Submitted: October 2, 2017  
 Laboratory Reference: 1710-010  
 Project: 4082-039-01

**TOTAL METALS  
 EPA 6010C/6020A  
 DUPLICATE QUALITY CONTROL**

Date Extracted: 10-6-17  
 Date Analyzed: 10-6&10-17

Matrix: Soil  
 Units: mg/kg (ppm)

Lab ID: 10-010-01

Analyte	Sample Result	Duplicate Result	RPD	PQL	Flags
Arsenic	ND	ND	NA	2.5	
Lead	ND	ND	NA	5.0	



Date of Report: October 12, 2017  
 Samples Submitted: October 2, 2017  
 Laboratory Reference: 1710-010  
 Project: 4082-039-01

**TOTAL METALS  
 EPA 6010C/6020A  
 MS/MSD QUALITY CONTROL**

Date Extracted: 10-6-17  
 Date Analyzed: 10-6&10-17

Matrix: Soil  
 Units: mg/kg (ppm)

Lab ID: 10-010-01

Analyte	Spike Level	MS	Percent Recovery	MSD	Percent Recovery	RPD	Flags
Arsenic	100	<b>94.8</b>	95	<b>94.8</b>	95	0	
Lead	250	<b>227</b>	91	<b>228</b>	91	1	



Date of Report: October 12, 2017  
Samples Submitted: October 2, 2017  
Laboratory Reference: 1710-010  
Project: 4082-039-01

### % MOISTURE

Date Analyzed: 10-6&9-17

Client ID	Lab ID	% Moisture
FL358-MW1-0-0.5	10-010-01	13
FL358-MW1-0.5-1	10-010-02	12
FL358-MW1-1.5-2.5	10-010-03	13
FL358-MW1-5-6	10-010-04	16
FL358-MW1-12-13	10-010-06	18
FL358-MW1-19-20	10-010-08	10
FL358-MW2-0-0.5	10-010-10	10
FL358-MW2-0.5-1	10-010-11	9
FL358-MW2-1.5-2.5	10-010-12	13
FL358-MW2-9-10	10-010-14	13
FL358-MW2-13-14	10-010-16	8





### Data Qualifiers and Abbreviations

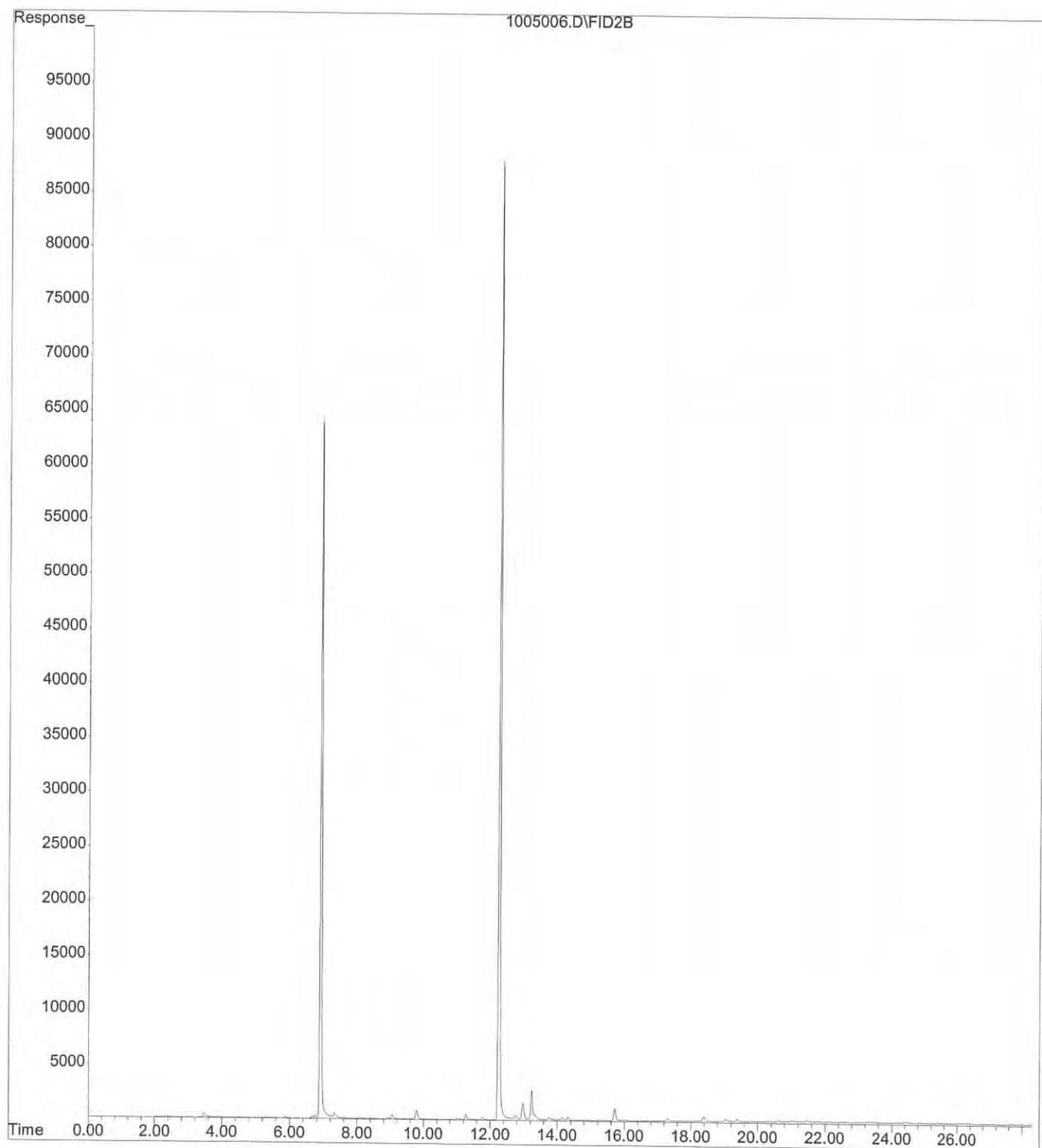
- A - Due to a high sample concentration, the amount spiked is insufficient for meaningful MS/MSD recovery data.
  - B - The analyte indicated was also found in the blank sample.
  - C - The duplicate RPD is outside control limits due to high result variability when analyte concentrations are within five times the quantitation limit.
  - E - The value reported exceeds the quantitation range and is an estimate.
  - F - Surrogate recovery data is not available due to the high concentration of coeluting target compounds.
  - H - The analyte indicated is a common laboratory solvent and may have been introduced during sample preparation, and be impacting the sample result.
  - I - Compound recovery is outside of the control limits.
  - J - The value reported was below the practical quantitation limit. The value is an estimate.
  - K - Sample duplicate RPD is outside control limits due to sample inhomogeneity. The sample was re-extracted and re-analyzed with similar results.
  - L - The RPD is outside of the control limits.
  - M - Hydrocarbons in the gasoline range are impacting the diesel range result.
  - M1 - Hydrocarbons in the gasoline range (toluene-naphthalene) are present in the sample.
  - N - Hydrocarbons in the lube oil range are impacting the diesel range result.
  - N1 - Hydrocarbons in diesel range are impacting lube oil range results.
  - O - Hydrocarbons indicative of heavier fuels are present in the sample and are impacting the gasoline result.
  - P - The RPD of the detected concentrations between the two columns is greater than 40.
  - Q - Surrogate recovery is outside of the control limits.
  - S - Surrogate recovery data is not available due to the necessary dilution of the sample.
  - T - The sample chromatogram is not similar to a typical \_\_\_\_\_.
  - U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.
  - U1 - The practical quantitation limit is elevated due to interferences present in the sample.
  - V - Matrix Spike/Matrix Spike Duplicate recoveries are outside control limits due to matrix effects.
  - W - Matrix Spike/Matrix Spike Duplicate RPD are outside control limits due to matrix effects.
  - X - Sample extract treated with a mercury cleanup procedure.
  - X1 - Sample extract treated with a Sulfuric acid/Silica gel cleanup procedure.
  - Y - The calibration verification for this analyte exceeded the 20% drift specified in method 8260C, and therefore the reported result should be considered an estimate. The overall performance of the calibration verification standard met the acceptance criteria of the method.
  - Z -
- ND - Not Detected at PQL  
 PQL - Practical Quantitation Limit  
 RPD - Relative Percent Difference



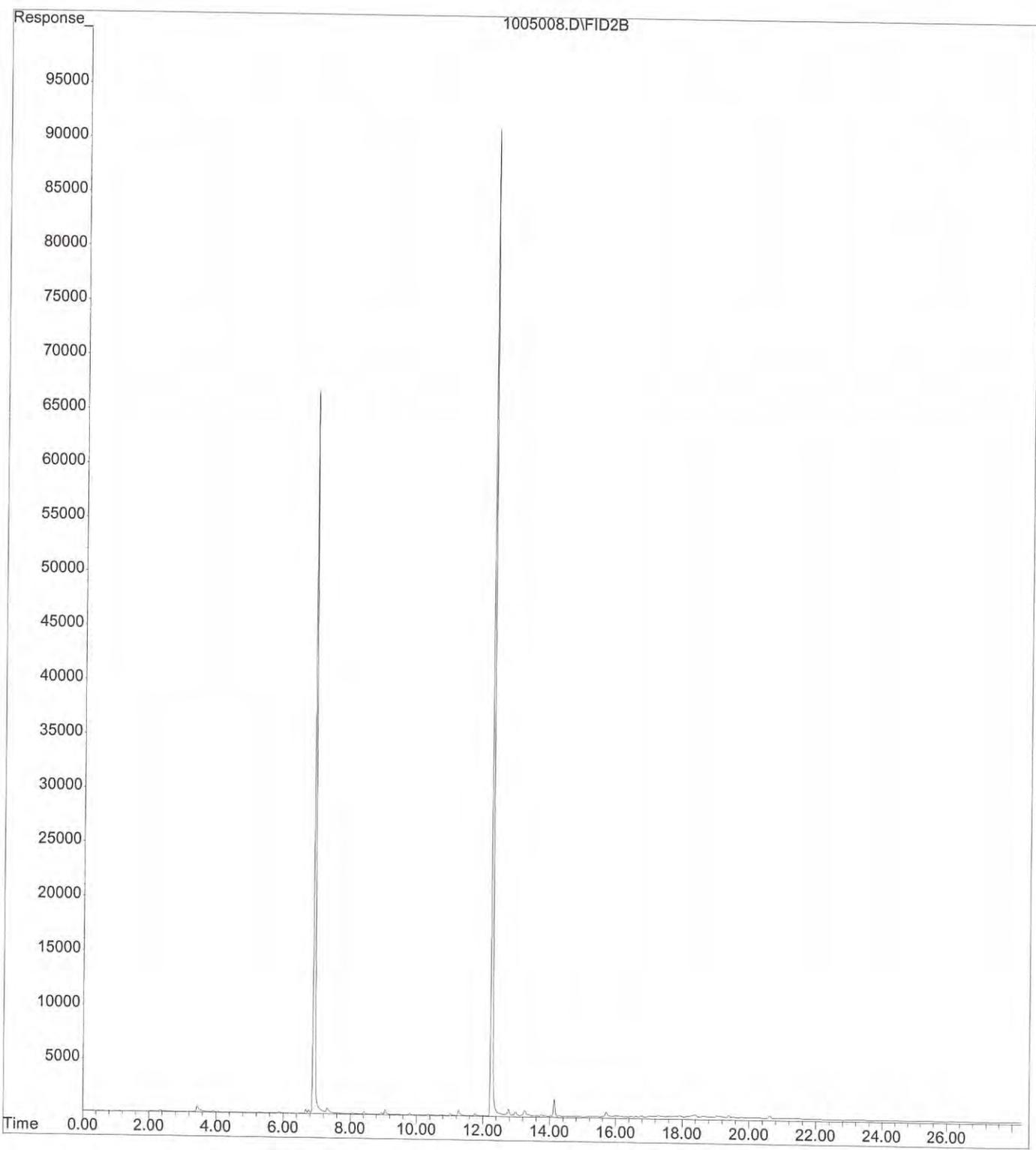




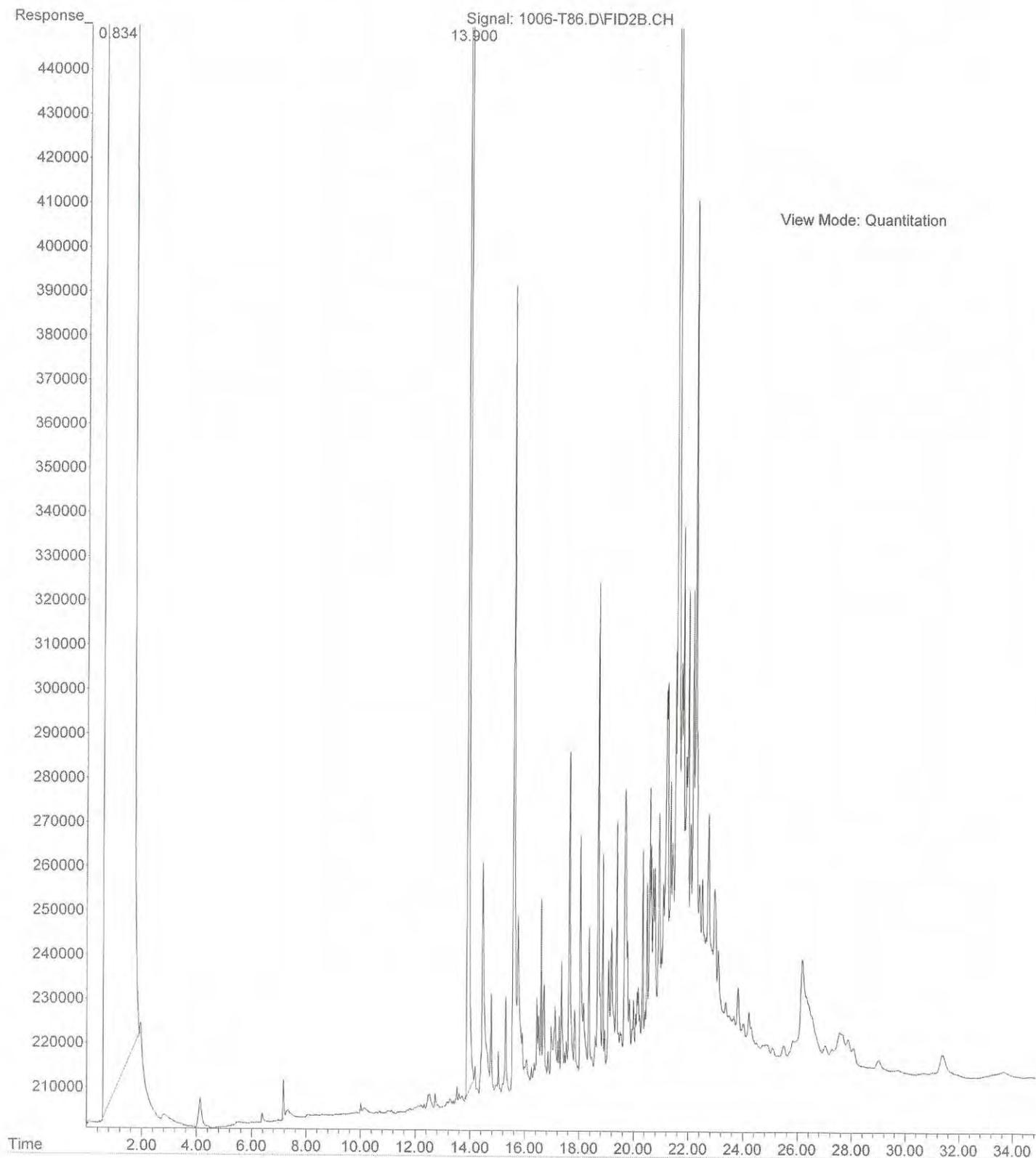
File : X:\BTEX\DARYL\DATA\D171005\1005006.D  
Operator :  
Acquired : 5 Oct 2017 15:35 using AcqMethod 170826B3.M  
Instrument : Daryl  
Sample Name: 10-010-03s  
Misc Info :  
Vial Number: 6



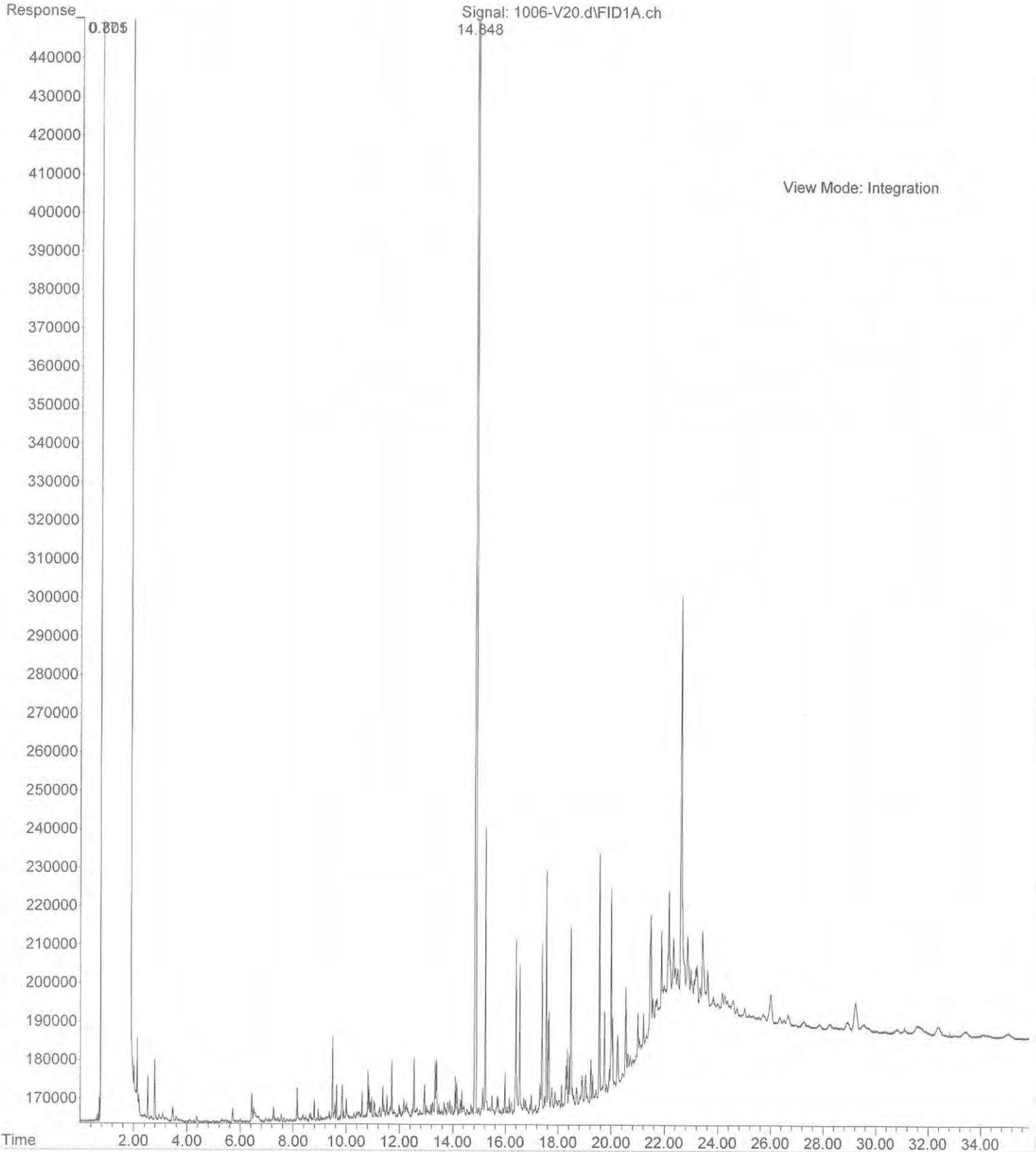
File : X:\BTEX\DARYL\DATA\D171005\1005008.D  
Operator :  
Acquired : 5 Oct 2017 16:43 using AcqMethod 170826B3.M  
Instrument : Daryl  
Sample Name: 10-010-04s  
Misc Info :  
Vial Number: 8



File :C:\msdchem\1\data\T171006.SEC\1006-T86.D  
Operator : ZT  
Acquired : 08 Oct 2017 4:05 using AcqMethod T161216F.M  
Instrument : Teri  
Sample Name: 10-010-03  
Misc Info :  
Vial Number: 86



File : C:\msdchem\2\data\V171006\1006-V20.d  
Operator :  
Acquired : 6 Oct 2017 21:48 using AcqMethod V170928F.M  
Instrument : Vigo  
Sample Name: 10-010-04  
Misc Info :  
Vial Number: 20





14648 NE 95<sup>th</sup> Street, Redmond, WA 98052 • (425) 883-3881

October 11, 2017

Marsi Beeson  
GeoEngineers, Inc.  
12000 NW Naito Prkway, Suite 180  
Portland, OR 97209

Re: Analytical Data for Project 4082-039-01  
Laboratory Reference No. 1710-083

Dear Marsi:

Enclosed are the analytical results and associated quality control data for samples submitted on October 6, 2017.

The standard policy of OnSite Environmental, Inc. is to store your samples for 30 days from the date of receipt. If you require longer storage, please contact the laboratory.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning the data, or need additional information, please feel free to call me.

Sincerely,

A handwritten signature in black ink, appearing to read "DB", with a long horizontal flourish extending to the right.

David Baumeister  
Project Manager

Enclosures



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OnSite Environmental, Inc. 14648 NE 95<sup>th</sup> Street, Redmond, WA 98052 (425) 883-3881

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: October 11, 2017  
Samples Submitted: October 6, 2017  
Laboratory Reference: 1710-083  
Project: 4082-039-01

### Case Narrative

Samples were collected on October 6, 2017 and received by the laboratory on October 6, 2017. They were maintained at the laboratory at a temperature of 2°C to 6°C.

Please note that any and all soil sample results are reported on a dry-weight basis, unless otherwise noted below.

General QA/QC issues associated with the analytical data enclosed in this laboratory report will be indicated with a reference to a comment or explanation on the Data Qualifier page. More complex and involved QA/QC issues will be discussed in detail below.



Date of Report: October 11, 2017  
Samples Submitted: October 6, 2017  
Laboratory Reference: 1710-083  
Project: 4082-039-01

#### ANALYTICAL REPORT FOR SAMPLES

Client ID	Laboratory ID	Matrix	Date Sampled	Date Received	Notes
FL358-MW2-20171006	10-083-01	Water	10-6-17	10-6-17	
FL358-MW1-20171006	10-083-02	Water	10-6-17	10-6-17	
FL358-MW4-20171006	10-083-03	Water	10-6-17	10-6-17	



Date of Report: October 11, 2017  
 Samples Submitted: October 6, 2017  
 Laboratory Reference: 1710-083  
 Project: 4082-039-01

**VOLATILES EPA 8260C**  
 page 1 of 2

Matrix: Water  
 Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>FL358-MW2-20171006</b>					
Laboratory ID:	10-083-01					
Dichlorodifluoromethane	ND	0.39	EPA 8260C	10-10-17	10-10-17	
Chloromethane	ND	1.0	EPA 8260C	10-10-17	10-10-17	
Vinyl Chloride	ND	0.20	EPA 8260C	10-10-17	10-10-17	
Bromomethane	ND	0.20	EPA 8260C	10-10-17	10-10-17	
Chloroethane	ND	1.0	EPA 8260C	10-10-17	10-10-17	
Trichlorofluoromethane	ND	0.20	EPA 8260C	10-10-17	10-10-17	
1,1-Dichloroethene	ND	0.20	EPA 8260C	10-10-17	10-10-17	
Acetone	ND	5.0	EPA 8260C	10-10-17	10-10-17	
Iodomethane	ND	1.4	EPA 8260C	10-10-17	10-10-17	
Carbon Disulfide	ND	0.20	EPA 8260C	10-10-17	10-10-17	
Methylene Chloride	ND	1.0	EPA 8260C	10-10-17	10-10-17	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260C	10-10-17	10-10-17	
Methyl t-Butyl Ether	ND	0.20	EPA 8260C	10-10-17	10-10-17	
1,1-Dichloroethane	ND	0.20	EPA 8260C	10-10-17	10-10-17	
Vinyl Acetate	ND	1.0	EPA 8260C	10-10-17	10-10-17	
2,2-Dichloropropane	ND	0.20	EPA 8260C	10-10-17	10-10-17	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260C	10-10-17	10-10-17	
2-Butanone	ND	5.0	EPA 8260C	10-10-17	10-10-17	
Bromochloromethane	ND	0.20	EPA 8260C	10-10-17	10-10-17	
Chloroform	ND	0.20	EPA 8260C	10-10-17	10-10-17	
1,1,1-Trichloroethane	ND	0.20	EPA 8260C	10-10-17	10-10-17	
Carbon Tetrachloride	ND	0.20	EPA 8260C	10-10-17	10-10-17	
1,1-Dichloropropene	ND	0.20	EPA 8260C	10-10-17	10-10-17	
Benzene	ND	0.20	EPA 8260C	10-10-17	10-10-17	
1,2-Dichloroethane	ND	0.20	EPA 8260C	10-10-17	10-10-17	
Trichloroethene	ND	0.20	EPA 8260C	10-10-17	10-10-17	
1,2-Dichloropropane	ND	0.20	EPA 8260C	10-10-17	10-10-17	
Dibromomethane	ND	0.20	EPA 8260C	10-10-17	10-10-17	
Bromodichloromethane	ND	0.20	EPA 8260C	10-10-17	10-10-17	
2-Chloroethyl Vinyl Ether	ND	4.5	EPA 8260C	10-10-17	10-10-17	
(cis) 1,3-Dichloropropene	ND	0.20	EPA 8260C	10-10-17	10-10-17	
Methyl Isobutyl Ketone	ND	2.0	EPA 8260C	10-10-17	10-10-17	
Toluene	ND	1.0	EPA 8260C	10-10-17	10-10-17	
(trans) 1,3-Dichloropropene	ND	0.20	EPA 8260C	10-10-17	10-10-17	



Date of Report: October 11, 2017  
 Samples Submitted: October 6, 2017  
 Laboratory Reference: 1710-083  
 Project: 4082-039-01

**VOLATILES EPA 8260C**  
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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>FL358-MW2-20171006</b>					
Laboratory ID:	10-083-01					
1,1,2-Trichloroethane	ND	0.20	EPA 8260C	10-10-17	10-10-17	
Tetrachloroethene	ND	0.20	EPA 8260C	10-10-17	10-10-17	
1,3-Dichloropropane	ND	0.20	EPA 8260C	10-10-17	10-10-17	
2-Hexanone	ND	2.0	EPA 8260C	10-10-17	10-10-17	
Dibromochloromethane	ND	0.20	EPA 8260C	10-10-17	10-10-17	
1,2-Dibromoethane	ND	0.20	EPA 8260C	10-10-17	10-10-17	
Chlorobenzene	ND	0.20	EPA 8260C	10-10-17	10-10-17	
1,1,1,2-Tetrachloroethane	ND	0.20	EPA 8260C	10-10-17	10-10-17	
Ethylbenzene	ND	0.20	EPA 8260C	10-10-17	10-10-17	
m,p-Xylene	ND	0.40	EPA 8260C	10-10-17	10-10-17	
o-Xylene	ND	0.20	EPA 8260C	10-10-17	10-10-17	
Styrene	ND	0.20	EPA 8260C	10-10-17	10-10-17	
Bromoform	ND	1.0	EPA 8260C	10-10-17	10-10-17	
Isopropylbenzene	ND	0.20	EPA 8260C	10-10-17	10-10-17	
Bromobenzene	ND	0.20	EPA 8260C	10-10-17	10-10-17	
1,1,2,2-Tetrachloroethane	ND	0.20	EPA 8260C	10-10-17	10-10-17	
1,2,3-Trichloropropane	ND	0.20	EPA 8260C	10-10-17	10-10-17	
n-Propylbenzene	ND	0.20	EPA 8260C	10-10-17	10-10-17	
2-Chlorotoluene	ND	0.20	EPA 8260C	10-10-17	10-10-17	
4-Chlorotoluene	ND	0.20	EPA 8260C	10-10-17	10-10-17	
1,3,5-Trimethylbenzene	ND	0.20	EPA 8260C	10-10-17	10-10-17	
tert-Butylbenzene	ND	0.20	EPA 8260C	10-10-17	10-10-17	
1,2,4-Trimethylbenzene	ND	0.20	EPA 8260C	10-10-17	10-10-17	
sec-Butylbenzene	ND	0.20	EPA 8260C	10-10-17	10-10-17	
1,3-Dichlorobenzene	ND	0.20	EPA 8260C	10-10-17	10-10-17	
p-Isopropyltoluene	ND	0.20	EPA 8260C	10-10-17	10-10-17	
1,4-Dichlorobenzene	ND	0.20	EPA 8260C	10-10-17	10-10-17	
1,2-Dichlorobenzene	ND	0.20	EPA 8260C	10-10-17	10-10-17	
n-Butylbenzene	ND	0.20	EPA 8260C	10-10-17	10-10-17	
1,2-Dibromo-3-chloropropane	ND	1.0	EPA 8260C	10-10-17	10-10-17	
1,2,4-Trichlorobenzene	ND	0.20	EPA 8260C	10-10-17	10-10-17	
Hexachlorobutadiene	ND	0.20	EPA 8260C	10-10-17	10-10-17	
Naphthalene	ND	1.3	EPA 8260C	10-10-17	10-10-17	
1,2,3-Trichlorobenzene	ND	0.20	EPA 8260C	10-10-17	10-10-17	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	99	77-129				
<i>Toluene-d8</i>	99	80-127				
<i>4-Bromofluorobenzene</i>	99	78-125				



Date of Report: October 11, 2017  
 Samples Submitted: October 6, 2017  
 Laboratory Reference: 1710-083  
 Project: 4082-039-01

**VOLATILES EPA 8260C**  
 page 1 of 2

Matrix: Water  
 Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>FL358-MW1-20171006</b>					
Laboratory ID:	10-083-02					
Dichlorodifluoromethane	ND	0.39	EPA 8260C	10-10-17	10-10-17	
Chloromethane	ND	1.0	EPA 8260C	10-10-17	10-10-17	
Vinyl Chloride	ND	0.20	EPA 8260C	10-10-17	10-10-17	
Bromomethane	ND	0.20	EPA 8260C	10-10-17	10-10-17	
Chloroethane	ND	1.0	EPA 8260C	10-10-17	10-10-17	
Trichlorofluoromethane	ND	0.20	EPA 8260C	10-10-17	10-10-17	
1,1-Dichloroethene	ND	0.20	EPA 8260C	10-10-17	10-10-17	
Acetone	ND	5.0	EPA 8260C	10-10-17	10-10-17	
Iodomethane	ND	1.4	EPA 8260C	10-10-17	10-10-17	
Carbon Disulfide	ND	0.20	EPA 8260C	10-10-17	10-10-17	
Methylene Chloride	ND	1.0	EPA 8260C	10-10-17	10-10-17	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260C	10-10-17	10-10-17	
Methyl t-Butyl Ether	ND	0.20	EPA 8260C	10-10-17	10-10-17	
1,1-Dichloroethane	ND	0.20	EPA 8260C	10-10-17	10-10-17	
Vinyl Acetate	ND	1.0	EPA 8260C	10-10-17	10-10-17	
2,2-Dichloropropane	ND	0.20	EPA 8260C	10-10-17	10-10-17	
(cis) 1,2-Dichloroethene	0.61	0.20	EPA 8260C	10-10-17	10-10-17	
2-Butanone	ND	5.0	EPA 8260C	10-10-17	10-10-17	
Bromochloromethane	ND	0.20	EPA 8260C	10-10-17	10-10-17	
Chloroform	ND	0.20	EPA 8260C	10-10-17	10-10-17	
1,1,1-Trichloroethane	ND	0.20	EPA 8260C	10-10-17	10-10-17	
Carbon Tetrachloride	ND	0.20	EPA 8260C	10-10-17	10-10-17	
1,1-Dichloropropene	ND	0.20	EPA 8260C	10-10-17	10-10-17	
Benzene	ND	0.20	EPA 8260C	10-10-17	10-10-17	
1,2-Dichloroethane	ND	0.20	EPA 8260C	10-10-17	10-10-17	
Trichloroethene	1.0	0.20	EPA 8260C	10-10-17	10-10-17	
1,2-Dichloropropane	ND	0.20	EPA 8260C	10-10-17	10-10-17	
Dibromomethane	ND	0.20	EPA 8260C	10-10-17	10-10-17	
Bromodichloromethane	ND	0.20	EPA 8260C	10-10-17	10-10-17	
2-Chloroethyl Vinyl Ether	ND	4.5	EPA 8260C	10-10-17	10-10-17	
(cis) 1,3-Dichloropropene	ND	0.20	EPA 8260C	10-10-17	10-10-17	
Methyl Isobutyl Ketone	ND	2.0	EPA 8260C	10-10-17	10-10-17	
Toluene	ND	1.0	EPA 8260C	10-10-17	10-10-17	
(trans) 1,3-Dichloropropene	ND	0.20	EPA 8260C	10-10-17	10-10-17	



Date of Report: October 11, 2017  
 Samples Submitted: October 6, 2017  
 Laboratory Reference: 1710-083  
 Project: 4082-039-01

**VOLATILES EPA 8260C**  
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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>FL358-MW1-20171006</b>					
Laboratory ID:	10-083-02					
1,1,2-Trichloroethane	ND	0.20	EPA 8260C	10-10-17	10-10-17	
Tetrachloroethene	0.21	0.20	EPA 8260C	10-10-17	10-10-17	
1,3-Dichloropropane	ND	0.20	EPA 8260C	10-10-17	10-10-17	
2-Hexanone	ND	2.0	EPA 8260C	10-10-17	10-10-17	
Dibromochloromethane	ND	0.20	EPA 8260C	10-10-17	10-10-17	
1,2-Dibromoethane	ND	0.20	EPA 8260C	10-10-17	10-10-17	
Chlorobenzene	ND	0.20	EPA 8260C	10-10-17	10-10-17	
1,1,1,2-Tetrachloroethane	ND	0.20	EPA 8260C	10-10-17	10-10-17	
Ethylbenzene	ND	0.20	EPA 8260C	10-10-17	10-10-17	
m,p-Xylene	ND	0.40	EPA 8260C	10-10-17	10-10-17	
o-Xylene	ND	0.20	EPA 8260C	10-10-17	10-10-17	
Styrene	ND	0.20	EPA 8260C	10-10-17	10-10-17	
Bromoform	ND	1.0	EPA 8260C	10-10-17	10-10-17	
Isopropylbenzene	ND	0.20	EPA 8260C	10-10-17	10-10-17	
Bromobenzene	ND	0.20	EPA 8260C	10-10-17	10-10-17	
1,1,2,2-Tetrachloroethane	ND	0.20	EPA 8260C	10-10-17	10-10-17	
1,2,3-Trichloropropane	ND	0.20	EPA 8260C	10-10-17	10-10-17	
n-Propylbenzene	ND	0.20	EPA 8260C	10-10-17	10-10-17	
2-Chlorotoluene	ND	0.20	EPA 8260C	10-10-17	10-10-17	
4-Chlorotoluene	ND	0.20	EPA 8260C	10-10-17	10-10-17	
1,3,5-Trimethylbenzene	ND	0.20	EPA 8260C	10-10-17	10-10-17	
tert-Butylbenzene	ND	0.20	EPA 8260C	10-10-17	10-10-17	
1,2,4-Trimethylbenzene	ND	0.20	EPA 8260C	10-10-17	10-10-17	
sec-Butylbenzene	ND	0.20	EPA 8260C	10-10-17	10-10-17	
1,3-Dichlorobenzene	ND	0.20	EPA 8260C	10-10-17	10-10-17	
p-Isopropyltoluene	ND	0.20	EPA 8260C	10-10-17	10-10-17	
1,4-Dichlorobenzene	ND	0.20	EPA 8260C	10-10-17	10-10-17	
1,2-Dichlorobenzene	ND	0.20	EPA 8260C	10-10-17	10-10-17	
n-Butylbenzene	ND	0.20	EPA 8260C	10-10-17	10-10-17	
1,2-Dibromo-3-chloropropane	ND	1.0	EPA 8260C	10-10-17	10-10-17	
1,2,4-Trichlorobenzene	ND	0.20	EPA 8260C	10-10-17	10-10-17	
Hexachlorobutadiene	ND	0.20	EPA 8260C	10-10-17	10-10-17	
Naphthalene	ND	1.3	EPA 8260C	10-10-17	10-10-17	
1,2,3-Trichlorobenzene	ND	0.20	EPA 8260C	10-10-17	10-10-17	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	99	77-129				
<i>Toluene-d8</i>	98	80-127				
<i>4-Bromofluorobenzene</i>	98	78-125				



Date of Report: October 11, 2017  
 Samples Submitted: October 6, 2017  
 Laboratory Reference: 1710-083  
 Project: 4082-039-01

**VOLATILES EPA 8260C**  
 page 1 of 2

Matrix: Water  
 Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>FL358-MW4-20171006</b>					
Laboratory ID:	10-083-03					
Dichlorodifluoromethane	ND	0.39	EPA 8260C	10-10-17	10-10-17	
Chloromethane	ND	1.0	EPA 8260C	10-10-17	10-10-17	
Vinyl Chloride	ND	0.20	EPA 8260C	10-10-17	10-10-17	
Bromomethane	ND	0.20	EPA 8260C	10-10-17	10-10-17	
Chloroethane	ND	1.0	EPA 8260C	10-10-17	10-10-17	
Trichlorofluoromethane	ND	0.20	EPA 8260C	10-10-17	10-10-17	
1,1-Dichloroethene	ND	0.20	EPA 8260C	10-10-17	10-10-17	
Acetone	ND	5.0	EPA 8260C	10-10-17	10-10-17	
Iodomethane	ND	1.4	EPA 8260C	10-10-17	10-10-17	
Carbon Disulfide	ND	0.20	EPA 8260C	10-10-17	10-10-17	
Methylene Chloride	ND	1.0	EPA 8260C	10-10-17	10-10-17	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260C	10-10-17	10-10-17	
Methyl t-Butyl Ether	ND	0.20	EPA 8260C	10-10-17	10-10-17	
1,1-Dichloroethane	ND	0.20	EPA 8260C	10-10-17	10-10-17	
Vinyl Acetate	ND	1.0	EPA 8260C	10-10-17	10-10-17	
2,2-Dichloropropane	ND	0.20	EPA 8260C	10-10-17	10-10-17	
(cis) 1,2-Dichloroethene	0.34	0.20	EPA 8260C	10-10-17	10-10-17	
2-Butanone	ND	5.0	EPA 8260C	10-10-17	10-10-17	
Bromochloromethane	ND	0.20	EPA 8260C	10-10-17	10-10-17	
Chloroform	ND	0.20	EPA 8260C	10-10-17	10-10-17	
1,1,1-Trichloroethane	ND	0.20	EPA 8260C	10-10-17	10-10-17	
Carbon Tetrachloride	ND	0.20	EPA 8260C	10-10-17	10-10-17	
1,1-Dichloropropene	ND	0.20	EPA 8260C	10-10-17	10-10-17	
Benzene	ND	0.20	EPA 8260C	10-10-17	10-10-17	
1,2-Dichloroethane	ND	0.20	EPA 8260C	10-10-17	10-10-17	
Trichloroethene	ND	0.20	EPA 8260C	10-10-17	10-10-17	
1,2-Dichloropropane	ND	0.20	EPA 8260C	10-10-17	10-10-17	
Dibromomethane	ND	0.20	EPA 8260C	10-10-17	10-10-17	
Bromodichloromethane	ND	0.20	EPA 8260C	10-10-17	10-10-17	
2-Chloroethyl Vinyl Ether	ND	4.5	EPA 8260C	10-10-17	10-10-17	
(cis) 1,3-Dichloropropene	ND	0.20	EPA 8260C	10-10-17	10-10-17	
Methyl Isobutyl Ketone	ND	2.0	EPA 8260C	10-10-17	10-10-17	
Toluene	ND	1.0	EPA 8260C	10-10-17	10-10-17	
(trans) 1,3-Dichloropropene	ND	0.20	EPA 8260C	10-10-17	10-10-17	



Date of Report: October 11, 2017  
 Samples Submitted: October 6, 2017  
 Laboratory Reference: 1710-083  
 Project: 4082-039-01

**VOLATILES EPA 8260C**  
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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>FL358-MW4-20171006</b>					
Laboratory ID:	10-083-03					
1,1,2-Trichloroethane	ND	0.20	EPA 8260C	10-10-17	10-10-17	
Tetrachloroethene	ND	0.20	EPA 8260C	10-10-17	10-10-17	
1,3-Dichloropropane	ND	0.20	EPA 8260C	10-10-17	10-10-17	
2-Hexanone	ND	2.0	EPA 8260C	10-10-17	10-10-17	
Dibromochloromethane	ND	0.20	EPA 8260C	10-10-17	10-10-17	
1,2-Dibromoethane	ND	0.20	EPA 8260C	10-10-17	10-10-17	
Chlorobenzene	ND	0.20	EPA 8260C	10-10-17	10-10-17	
1,1,1,2-Tetrachloroethane	ND	0.20	EPA 8260C	10-10-17	10-10-17	
Ethylbenzene	ND	0.20	EPA 8260C	10-10-17	10-10-17	
m,p-Xylene	ND	0.40	EPA 8260C	10-10-17	10-10-17	
o-Xylene	ND	0.20	EPA 8260C	10-10-17	10-10-17	
Styrene	ND	0.20	EPA 8260C	10-10-17	10-10-17	
Bromoform	ND	1.0	EPA 8260C	10-10-17	10-10-17	
Isopropylbenzene	ND	0.20	EPA 8260C	10-10-17	10-10-17	
Bromobenzene	ND	0.20	EPA 8260C	10-10-17	10-10-17	
1,1,2,2-Tetrachloroethane	ND	0.20	EPA 8260C	10-10-17	10-10-17	
1,2,3-Trichloropropane	ND	0.20	EPA 8260C	10-10-17	10-10-17	
n-Propylbenzene	ND	0.20	EPA 8260C	10-10-17	10-10-17	
2-Chlorotoluene	ND	0.20	EPA 8260C	10-10-17	10-10-17	
4-Chlorotoluene	ND	0.20	EPA 8260C	10-10-17	10-10-17	
1,3,5-Trimethylbenzene	ND	0.20	EPA 8260C	10-10-17	10-10-17	
tert-Butylbenzene	ND	0.20	EPA 8260C	10-10-17	10-10-17	
1,2,4-Trimethylbenzene	ND	0.20	EPA 8260C	10-10-17	10-10-17	
sec-Butylbenzene	ND	0.20	EPA 8260C	10-10-17	10-10-17	
1,3-Dichlorobenzene	ND	0.20	EPA 8260C	10-10-17	10-10-17	
p-Isopropyltoluene	ND	0.20	EPA 8260C	10-10-17	10-10-17	
1,4-Dichlorobenzene	ND	0.20	EPA 8260C	10-10-17	10-10-17	
1,2-Dichlorobenzene	ND	0.20	EPA 8260C	10-10-17	10-10-17	
n-Butylbenzene	ND	0.20	EPA 8260C	10-10-17	10-10-17	
1,2-Dibromo-3-chloropropane	ND	1.0	EPA 8260C	10-10-17	10-10-17	
1,2,4-Trichlorobenzene	ND	0.20	EPA 8260C	10-10-17	10-10-17	
Hexachlorobutadiene	ND	0.20	EPA 8260C	10-10-17	10-10-17	
Naphthalene	ND	1.3	EPA 8260C	10-10-17	10-10-17	
1,2,3-Trichlorobenzene	ND	0.20	EPA 8260C	10-10-17	10-10-17	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>100</i>	<i>77-129</i>				
<i>Toluene-d8</i>	<i>98</i>	<i>80-127</i>				
<i>4-Bromofluorobenzene</i>	<i>98</i>	<i>78-125</i>				



Date of Report: October 11, 2017  
 Samples Submitted: October 6, 2017  
 Laboratory Reference: 1710-083  
 Project: 4082-039-01

**VOLATILES by EPA 8260C**  
**METHOD BLANK QUALITY CONTROL**  
 page 1 of 2

Matrix: Water  
 Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB1010W1					
Dichlorodifluoromethane	ND	0.39	EPA 8260C	10-10-17	10-10-17	
Chloromethane	ND	1.0	EPA 8260C	10-10-17	10-10-17	
Vinyl Chloride	ND	0.20	EPA 8260C	10-10-17	10-10-17	
Bromomethane	ND	0.20	EPA 8260C	10-10-17	10-10-17	
Chloroethane	ND	1.0	EPA 8260C	10-10-17	10-10-17	
Trichlorofluoromethane	ND	0.20	EPA 8260C	10-10-17	10-10-17	
1,1-Dichloroethene	ND	0.20	EPA 8260C	10-10-17	10-10-17	
Acetone	ND	5.0	EPA 8260C	10-10-17	10-10-17	
Iodomethane	ND	1.4	EPA 8260C	10-10-17	10-10-17	
Carbon Disulfide	ND	0.20	EPA 8260C	10-10-17	10-10-17	
Methylene Chloride	ND	1.0	EPA 8260C	10-10-17	10-10-17	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260C	10-10-17	10-10-17	
Methyl t-Butyl Ether	ND	0.20	EPA 8260C	10-10-17	10-10-17	
1,1-Dichloroethane	ND	0.20	EPA 8260C	10-10-17	10-10-17	
Vinyl Acetate	ND	1.0	EPA 8260C	10-10-17	10-10-17	
2,2-Dichloropropane	ND	0.20	EPA 8260C	10-10-17	10-10-17	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260C	10-10-17	10-10-17	
2-Butanone	ND	5.0	EPA 8260C	10-10-17	10-10-17	
Bromochloromethane	ND	0.20	EPA 8260C	10-10-17	10-10-17	
Chloroform	ND	0.20	EPA 8260C	10-10-17	10-10-17	
1,1,1-Trichloroethane	ND	0.20	EPA 8260C	10-10-17	10-10-17	
Carbon Tetrachloride	ND	0.20	EPA 8260C	10-10-17	10-10-17	
1,1-Dichloropropene	ND	0.20	EPA 8260C	10-10-17	10-10-17	
Benzene	ND	0.20	EPA 8260C	10-10-17	10-10-17	
1,2-Dichloroethane	ND	0.20	EPA 8260C	10-10-17	10-10-17	
Trichloroethene	ND	0.20	EPA 8260C	10-10-17	10-10-17	
1,2-Dichloropropane	ND	0.20	EPA 8260C	10-10-17	10-10-17	
Dibromomethane	ND	0.20	EPA 8260C	10-10-17	10-10-17	
Bromodichloromethane	ND	0.20	EPA 8260C	10-10-17	10-10-17	
2-Chloroethyl Vinyl Ether	ND	4.5	EPA 8260C	10-10-17	10-10-17	
(cis) 1,3-Dichloropropene	ND	0.20	EPA 8260C	10-10-17	10-10-17	
Methyl Isobutyl Ketone	ND	2.0	EPA 8260C	10-10-17	10-10-17	
Toluene	ND	1.0	EPA 8260C	10-10-17	10-10-17	
(trans) 1,3-Dichloropropene	ND	0.20	EPA 8260C	10-10-17	10-10-17	



Date of Report: October 11, 2017  
 Samples Submitted: October 6, 2017  
 Laboratory Reference: 1710-083  
 Project: 4082-039-01

**VOLATILES by EPA 8260C**  
**METHOD BLANK QUALITY CONTROL**  
 page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:		MB1010W1				
1,1,2-Trichloroethane	ND	0.20	EPA 8260C	10-10-17	10-10-17	
Tetrachloroethene	ND	0.20	EPA 8260C	10-10-17	10-10-17	
1,3-Dichloropropane	ND	0.20	EPA 8260C	10-10-17	10-10-17	
2-Hexanone	ND	2.0	EPA 8260C	10-10-17	10-10-17	
Dibromochloromethane	ND	0.20	EPA 8260C	10-10-17	10-10-17	
1,2-Dibromoethane	ND	0.20	EPA 8260C	10-10-17	10-10-17	
Chlorobenzene	ND	0.20	EPA 8260C	10-10-17	10-10-17	
1,1,1,2-Tetrachloroethane	ND	0.20	EPA 8260C	10-10-17	10-10-17	
Ethylbenzene	ND	0.20	EPA 8260C	10-10-17	10-10-17	
m,p-Xylene	ND	0.40	EPA 8260C	10-10-17	10-10-17	
o-Xylene	ND	0.20	EPA 8260C	10-10-17	10-10-17	
Styrene	ND	0.20	EPA 8260C	10-10-17	10-10-17	
Bromoform	ND	1.0	EPA 8260C	10-10-17	10-10-17	
Isopropylbenzene	ND	0.20	EPA 8260C	10-10-17	10-10-17	
Bromobenzene	ND	0.20	EPA 8260C	10-10-17	10-10-17	
1,1,2,2-Tetrachloroethane	ND	0.20	EPA 8260C	10-10-17	10-10-17	
1,2,3-Trichloropropane	ND	0.20	EPA 8260C	10-10-17	10-10-17	
n-Propylbenzene	ND	0.20	EPA 8260C	10-10-17	10-10-17	
2-Chlorotoluene	ND	0.20	EPA 8260C	10-10-17	10-10-17	
4-Chlorotoluene	ND	0.20	EPA 8260C	10-10-17	10-10-17	
1,3,5-Trimethylbenzene	ND	0.20	EPA 8260C	10-10-17	10-10-17	
tert-Butylbenzene	ND	0.20	EPA 8260C	10-10-17	10-10-17	
1,2,4-Trimethylbenzene	ND	0.20	EPA 8260C	10-10-17	10-10-17	
sec-Butylbenzene	ND	0.20	EPA 8260C	10-10-17	10-10-17	
1,3-Dichlorobenzene	ND	0.20	EPA 8260C	10-10-17	10-10-17	
p-Isopropyltoluene	ND	0.20	EPA 8260C	10-10-17	10-10-17	
1,4-Dichlorobenzene	ND	0.20	EPA 8260C	10-10-17	10-10-17	
1,2-Dichlorobenzene	ND	0.20	EPA 8260C	10-10-17	10-10-17	
n-Butylbenzene	ND	0.20	EPA 8260C	10-10-17	10-10-17	
1,2-Dibromo-3-chloropropane	ND	1.0	EPA 8260C	10-10-17	10-10-17	
1,2,4-Trichlorobenzene	ND	0.20	EPA 8260C	10-10-17	10-10-17	
Hexachlorobutadiene	ND	0.20	EPA 8260C	10-10-17	10-10-17	
Naphthalene	ND	1.3	EPA 8260C	10-10-17	10-10-17	
1,2,3-Trichlorobenzene	ND	0.20	EPA 8260C	10-10-17	10-10-17	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>97</i>	<i>77-129</i>				
<i>Toluene-d8</i>	<i>97</i>	<i>80-127</i>				
<i>4-Bromofluorobenzene</i>	<i>98</i>	<i>78-125</i>				



Date of Report: October 11, 2017  
 Samples Submitted: October 6, 2017  
 Laboratory Reference: 1710-083  
 Project: 4082-039-01

**VOLATILES by EPA 8260C  
 SB/SBD QUALITY CONTROL**

Matrix: Water  
 Units: ug/L

Analyte	Result		Spike Level		Percent Recovery		Recovery	RPD		Flags
					Recovery	Limits	RPD	Limit		
<b>SPIKE BLANKS</b>										
Laboratory ID:	SB1010W1									
	SB	SBD	SB	SBD	SB	SBD				
1,1-Dichloroethene	10.7	10.3	10.0	10.0	107	103	63-127	4	17	
Benzene	10.9	10.9	10.0	10.0	109	109	76-121	0	12	
Trichloroethene	9.72	9.47	10.0	10.0	97	95	64-120	3	15	
Toluene	10.5	10.3	10.0	10.0	105	103	82-120	2	13	
Chlorobenzene	10.3	10.0	10.0	10.0	103	100	80-120	3	14	
<i>Surrogate:</i>										
Dibromofluoromethane					92	95	77-129			
Toluene-d8					97	96	80-127			
4-Bromofluorobenzene					96	97	78-125			





### Data Qualifiers and Abbreviations

- A - Due to a high sample concentration, the amount spiked is insufficient for meaningful MS/MSD recovery data.
  - B - The analyte indicated was also found in the blank sample.
  - C - The duplicate RPD is outside control limits due to high result variability when analyte concentrations are within five times the quantitation limit.
  - E - The value reported exceeds the quantitation range and is an estimate.
  - F - Surrogate recovery data is not available due to the high concentration of coeluting target compounds.
  - H - The analyte indicated is a common laboratory solvent and may have been introduced during sample preparation, and be impacting the sample result.
  - I - Compound recovery is outside of the control limits.
  - J - The value reported was below the practical quantitation limit. The value is an estimate.
  - K - Sample duplicate RPD is outside control limits due to sample inhomogeneity. The sample was re-extracted and re-analyzed with similar results.
  - L - The RPD is outside of the control limits.
  - M - Hydrocarbons in the gasoline range are impacting the diesel range result.
  - M1 - Hydrocarbons in the gasoline range (toluene-naphthalene) are present in the sample.
  - N - Hydrocarbons in the lube oil range are impacting the diesel range result.
  - N1 - Hydrocarbons in diesel range are impacting lube oil range results.
  - O - Hydrocarbons indicative of heavier fuels are present in the sample and are impacting the gasoline result.
  - P - The RPD of the detected concentrations between the two columns is greater than 40.
  - Q - Surrogate recovery is outside of the control limits.
  - S - Surrogate recovery data is not available due to the necessary dilution of the sample.
  - T - The sample chromatogram is not similar to a typical \_\_\_\_\_.
  - U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.
  - U1 - The practical quantitation limit is elevated due to interferences present in the sample.
  - V - Matrix Spike/Matrix Spike Duplicate recoveries are outside control limits due to matrix effects.
  - W - Matrix Spike/Matrix Spike Duplicate RPD are outside control limits due to matrix effects.
  - X - Sample extract treated with a mercury cleanup procedure.
  - X1 - Sample extract treated with a Sulfuric acid/Silica gel cleanup procedure.
  - Y - The calibration verification for this analyte exceeded the 20% drift specified in method 8260C, and therefore the reported result should be considered an estimate. The overall performance of the calibration verification standard met the acceptance criteria of the method.
  - Z -
- ND - Not Detected at PQL  
 PQL - Practical Quantitation Limit  
 RPD - Relative Percent Difference





**MVA Onsite Environmental Inc.**  
Analytical Laboratory Testing Services  
14648 NE 95th Street • Redmond, WA 98052  
Phone: (425) 883-3881 • www.onsite-env.com

# Chain of Custody

Turnaround Request  
(in working days)  
(Check One)

Same Day  1 Day

2 Days  3 Days

Standard (7 Days)  
(TPH analysis 5 Days)

5 DAYS  
(other)

Laboratory Number:

**10-083**

Company: **GE7**  
Project Number: **4082-039-01**  
Project Name: **Sound Transit + Phasell**  
Project Manager: **Marsi Beeson**  
Sampled by: **W6/RC**

Lab ID Sample Identification Date Sampled Time Sampled Matrix

1	FL358-MW3-20171004	10/6/17	938	Water 4
2	FL358-MW1-20171006		1110	
3	FL358-MW4-20171006		1035	

Number of Containers

NWTPH-HCID	
NWTPH-Gx/BTEX	
NWTPH-Gx	
NWTPH-Dx ( <input type="checkbox"/> Acid / SG Clean-up)	
Volatiles 8260C	<input checked="" type="checkbox"/>
Halogenated Volatiles 8260C	<input checked="" type="checkbox"/>
EDB EPA 8011 (Waters Only)	
Semivolatiles 8270D/SIM (with low-level PAHs)	
PAHs 8270D/SIM (low-level)	
PCBs 8082A	
Organochlorine Pesticides 8081B	
Organophosphorus Pesticides 8270D/SIM	
Chlorinated Acid Herbicides 8151A	
Total RCRA Metals	
Total MTCA Metals	
TCLP Metals	
HEM (oil and grease) 1664A	
% Moisture	

Signature	Company	Date	Time	Comments/Special Instructions
<i>[Signature]</i>	GE7	10/6/17	1400	* Add 10/9/17-23 65 day TAT
<i>[Signature]</i>	Onsite	10-6-17	1400	

Relinquished Received Relinquished Received Relinquished Received Relinquished Received

Reviewed/Date

Data Package: Standard  Level III  Level IV

Chromatograms with final report  Electronic Data Deliverables (EDDs)



14648 NE 95<sup>th</sup> Street, Redmond, WA 98052 • (425) 883-3881

October 16, 2017

Marsi Beeson  
GeoEngineers, Inc.  
12000 NW Naito Prkway, Suite 180  
Portland, OR 97209

Re: Analytical Data for Project 4082-039-01  
Laboratory Reference No. 1710-105

Dear Marsi:

Enclosed are the analytical results and associated quality control data for samples submitted on October 9, 2017.

The standard policy of OnSite Environmental, Inc. is to store your samples for 30 days from the date of receipt. If you require longer storage, please contact the laboratory.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning the data, or need additional information, please feel free to call me.

Sincerely,

A handwritten signature in black ink, appearing to read "DB", with a long horizontal stroke extending to the right.

David Baumeister  
Project Manager

Enclosures



---

OnSite Environmental, Inc. 14648 NE 95<sup>th</sup> Street, Redmond, WA 98052 (425) 883-3881

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: October 16, 2017  
Samples Submitted: October 9, 2017  
Laboratory Reference: 1710-105  
Project: 4082-039-01

### Case Narrative

Samples were collected on October 9, 2017 and received by the laboratory on October 9, 2017. They were maintained at the laboratory at a temperature of 2°C to 6°C.

Please note that any and all soil sample results are reported on a dry-weight basis, unless otherwise noted below.

General QA/QC issues associated with the analytical data enclosed in this laboratory report will be indicated with a reference to a comment or explanation on the Data Qualifier page. More complex and involved QA/QC issues will be discussed in detail below.



Date of Report: October 16, 2017  
Samples Submitted: October 9, 2017  
Laboratory Reference: 1710-105  
Project: 4082-039-01

### ANALYTICAL REPORT FOR SAMPLES

Client ID	Laboratory ID	Matrix	Date Sampled	Date Received	Notes
FL358-MW3-20171009	10-105-01	Water	10-9-17	10-9-17	
DUP-20171009	10-105-02	Water	10-9-17	10-9-17	
RIN-Poly-20171009	10-105-03	Water	10-9-17	10-9-17	
RIN-WLI-20171009	10-105-04	Water	10-9-17	10-9-17	



Date of Report: October 16, 2017  
 Samples Submitted: October 9, 2017  
 Laboratory Reference: 1710-105  
 Project: 4082-039-01

**VOLATILES EPA 8260C**  
 page 1 of 2

Matrix: Water  
 Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>FL358-MW3-20171009</b>					
Laboratory ID:	10-105-01					
Dichlorodifluoromethane	ND	0.20	EPA 8260C	10-13-17	10-13-17	
Chloromethane	ND	1.0	EPA 8260C	10-13-17	10-13-17	
Vinyl Chloride	ND	0.20	EPA 8260C	10-13-17	10-13-17	
Bromomethane	ND	0.20	EPA 8260C	10-13-17	10-13-17	
Chloroethane	ND	1.0	EPA 8260C	10-13-17	10-13-17	
Trichlorofluoromethane	ND	0.20	EPA 8260C	10-13-17	10-13-17	
1,1-Dichloroethene	ND	0.20	EPA 8260C	10-13-17	10-13-17	
Acetone	ND	5.0	EPA 8260C	10-13-17	10-13-17	
Iodomethane	ND	2.0	EPA 8260C	10-13-17	10-13-17	
Carbon Disulfide	ND	0.27	EPA 8260C	10-13-17	10-13-17	
Methylene Chloride	ND	1.0	EPA 8260C	10-13-17	10-13-17	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260C	10-13-17	10-13-17	
Methyl t-Butyl Ether	ND	0.20	EPA 8260C	10-13-17	10-13-17	
1,1-Dichloroethane	ND	0.20	EPA 8260C	10-13-17	10-13-17	
Vinyl Acetate	ND	1.3	EPA 8260C	10-13-17	10-13-17	
2,2-Dichloropropane	ND	0.20	EPA 8260C	10-13-17	10-13-17	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260C	10-13-17	10-13-17	
2-Butanone	ND	5.0	EPA 8260C	10-13-17	10-13-17	
Bromochloromethane	ND	0.20	EPA 8260C	10-13-17	10-13-17	
Chloroform	ND	0.20	EPA 8260C	10-13-17	10-13-17	
1,1,1-Trichloroethane	ND	0.20	EPA 8260C	10-13-17	10-13-17	
Carbon Tetrachloride	ND	0.20	EPA 8260C	10-13-17	10-13-17	
1,1-Dichloropropene	ND	0.20	EPA 8260C	10-13-17	10-13-17	
Benzene	ND	0.20	EPA 8260C	10-13-17	10-13-17	
1,2-Dichloroethane	ND	0.20	EPA 8260C	10-13-17	10-13-17	
Trichloroethene	ND	0.20	EPA 8260C	10-13-17	10-13-17	
1,2-Dichloropropane	ND	0.20	EPA 8260C	10-13-17	10-13-17	
Dibromomethane	ND	0.20	EPA 8260C	10-13-17	10-13-17	
Bromodichloromethane	ND	0.20	EPA 8260C	10-13-17	10-13-17	
2-Chloroethyl Vinyl Ether	ND	10	EPA 8260C	10-13-17	10-13-17	
(cis) 1,3-Dichloropropene	ND	0.20	EPA 8260C	10-13-17	10-13-17	
Methyl Isobutyl Ketone	ND	2.5	EPA 8260C	10-13-17	10-13-17	
Toluene	ND	1.0	EPA 8260C	10-13-17	10-13-17	
(trans) 1,3-Dichloropropene	ND	0.20	EPA 8260C	10-13-17	10-13-17	



Date of Report: October 16, 2017  
 Samples Submitted: October 9, 2017  
 Laboratory Reference: 1710-105  
 Project: 4082-039-01

**VOLATILES EPA 8260C**  
 page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>FL358-MW3-20171009</b>					
Laboratory ID:	10-105-01					
1,1,2-Trichloroethane	ND	0.20	EPA 8260C	10-13-17	10-13-17	
Tetrachloroethene	ND	0.20	EPA 8260C	10-13-17	10-13-17	
1,3-Dichloropropane	ND	0.20	EPA 8260C	10-13-17	10-13-17	
2-Hexanone	ND	2.0	EPA 8260C	10-13-17	10-13-17	
Dibromochloromethane	ND	0.20	EPA 8260C	10-13-17	10-13-17	
1,2-Dibromoethane	ND	0.20	EPA 8260C	10-13-17	10-13-17	
Chlorobenzene	ND	0.20	EPA 8260C	10-13-17	10-13-17	
1,1,1,2-Tetrachloroethane	ND	0.20	EPA 8260C	10-13-17	10-13-17	
Ethylbenzene	ND	0.20	EPA 8260C	10-13-17	10-13-17	
m,p-Xylene	ND	0.40	EPA 8260C	10-13-17	10-13-17	
o-Xylene	ND	0.20	EPA 8260C	10-13-17	10-13-17	
Styrene	ND	0.20	EPA 8260C	10-13-17	10-13-17	
Bromoform	ND	1.0	EPA 8260C	10-13-17	10-13-17	
Isopropylbenzene	ND	0.20	EPA 8260C	10-13-17	10-13-17	
Bromobenzene	ND	0.20	EPA 8260C	10-13-17	10-13-17	
1,1,2,2-Tetrachloroethane	ND	0.20	EPA 8260C	10-13-17	10-13-17	
1,2,3-Trichloropropane	ND	0.20	EPA 8260C	10-13-17	10-13-17	
n-Propylbenzene	ND	0.20	EPA 8260C	10-13-17	10-13-17	
2-Chlorotoluene	ND	0.20	EPA 8260C	10-13-17	10-13-17	
4-Chlorotoluene	ND	0.20	EPA 8260C	10-13-17	10-13-17	
1,3,5-Trimethylbenzene	ND	0.20	EPA 8260C	10-13-17	10-13-17	
tert-Butylbenzene	ND	0.20	EPA 8260C	10-13-17	10-13-17	
1,2,4-Trimethylbenzene	ND	0.20	EPA 8260C	10-13-17	10-13-17	
sec-Butylbenzene	ND	0.20	EPA 8260C	10-13-17	10-13-17	
1,3-Dichlorobenzene	ND	0.20	EPA 8260C	10-13-17	10-13-17	
p-Isopropyltoluene	ND	0.20	EPA 8260C	10-13-17	10-13-17	
1,4-Dichlorobenzene	ND	0.20	EPA 8260C	10-13-17	10-13-17	
1,2-Dichlorobenzene	ND	0.20	EPA 8260C	10-13-17	10-13-17	
n-Butylbenzene	ND	0.20	EPA 8260C	10-13-17	10-13-17	
1,2-Dibromo-3-chloropropane	ND	1.0	EPA 8260C	10-13-17	10-13-17	
1,2,4-Trichlorobenzene	ND	0.20	EPA 8260C	10-13-17	10-13-17	
Hexachlorobutadiene	ND	0.20	EPA 8260C	10-13-17	10-13-17	
Naphthalene	ND	1.3	EPA 8260C	10-13-17	10-13-17	
1,2,3-Trichlorobenzene	ND	0.20	EPA 8260C	10-13-17	10-13-17	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	89	77-129				
<i>Toluene-d8</i>	95	80-127				
<i>4-Bromofluorobenzene</i>	99	78-125				



Date of Report: October 16, 2017  
 Samples Submitted: October 9, 2017  
 Laboratory Reference: 1710-105  
 Project: 4082-039-01

**VOLATILES EPA 8260C**  
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Matrix: Water  
 Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>DUP-20171009</b>					
Laboratory ID:	10-105-02					
Dichlorodifluoromethane	ND	0.20	EPA 8260C	10-13-17	10-13-17	
Chloromethane	ND	1.0	EPA 8260C	10-13-17	10-13-17	
Vinyl Chloride	ND	0.20	EPA 8260C	10-13-17	10-13-17	
Bromomethane	ND	0.20	EPA 8260C	10-13-17	10-13-17	
Chloroethane	ND	1.0	EPA 8260C	10-13-17	10-13-17	
Trichlorofluoromethane	ND	0.20	EPA 8260C	10-13-17	10-13-17	
1,1-Dichloroethene	ND	0.20	EPA 8260C	10-13-17	10-13-17	
Acetone	ND	5.0	EPA 8260C	10-13-17	10-13-17	
Iodomethane	ND	2.0	EPA 8260C	10-13-17	10-13-17	
Carbon Disulfide	ND	0.27	EPA 8260C	10-13-17	10-13-17	
Methylene Chloride	ND	1.0	EPA 8260C	10-13-17	10-13-17	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260C	10-13-17	10-13-17	
Methyl t-Butyl Ether	ND	0.20	EPA 8260C	10-13-17	10-13-17	
1,1-Dichloroethane	ND	0.20	EPA 8260C	10-13-17	10-13-17	
Vinyl Acetate	ND	1.3	EPA 8260C	10-13-17	10-13-17	
2,2-Dichloropropane	ND	0.20	EPA 8260C	10-13-17	10-13-17	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260C	10-13-17	10-13-17	
2-Butanone	ND	5.0	EPA 8260C	10-13-17	10-13-17	
Bromochloromethane	ND	0.20	EPA 8260C	10-13-17	10-13-17	
Chloroform	ND	0.20	EPA 8260C	10-13-17	10-13-17	
1,1,1-Trichloroethane	ND	0.20	EPA 8260C	10-13-17	10-13-17	
Carbon Tetrachloride	ND	0.20	EPA 8260C	10-13-17	10-13-17	
1,1-Dichloropropene	ND	0.20	EPA 8260C	10-13-17	10-13-17	
Benzene	ND	0.20	EPA 8260C	10-13-17	10-13-17	
1,2-Dichloroethane	ND	0.20	EPA 8260C	10-13-17	10-13-17	
Trichloroethene	ND	0.20	EPA 8260C	10-13-17	10-13-17	
1,2-Dichloropropane	ND	0.20	EPA 8260C	10-13-17	10-13-17	
Dibromomethane	ND	0.20	EPA 8260C	10-13-17	10-13-17	
Bromodichloromethane	ND	0.20	EPA 8260C	10-13-17	10-13-17	
2-Chloroethyl Vinyl Ether	ND	10	EPA 8260C	10-13-17	10-13-17	
(cis) 1,3-Dichloropropene	ND	0.20	EPA 8260C	10-13-17	10-13-17	
Methyl Isobutyl Ketone	ND	2.5	EPA 8260C	10-13-17	10-13-17	
Toluene	ND	1.0	EPA 8260C	10-13-17	10-13-17	
(trans) 1,3-Dichloropropene	ND	0.20	EPA 8260C	10-13-17	10-13-17	



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**VOLATILES EPA 8260C**  
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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>DUP-20171009</b>					
Laboratory ID:	10-105-02					
1,1,2-Trichloroethane	ND	0.20	EPA 8260C	10-13-17	10-13-17	
Tetrachloroethene	ND	0.20	EPA 8260C	10-13-17	10-13-17	
1,3-Dichloropropane	ND	0.20	EPA 8260C	10-13-17	10-13-17	
2-Hexanone	ND	2.0	EPA 8260C	10-13-17	10-13-17	
Dibromochloromethane	ND	0.20	EPA 8260C	10-13-17	10-13-17	
1,2-Dibromoethane	ND	0.20	EPA 8260C	10-13-17	10-13-17	
Chlorobenzene	ND	0.20	EPA 8260C	10-13-17	10-13-17	
1,1,1,2-Tetrachloroethane	ND	0.20	EPA 8260C	10-13-17	10-13-17	
Ethylbenzene	ND	0.20	EPA 8260C	10-13-17	10-13-17	
m,p-Xylene	ND	0.40	EPA 8260C	10-13-17	10-13-17	
o-Xylene	ND	0.20	EPA 8260C	10-13-17	10-13-17	
Styrene	ND	0.20	EPA 8260C	10-13-17	10-13-17	
Bromoform	ND	1.0	EPA 8260C	10-13-17	10-13-17	
Isopropylbenzene	ND	0.20	EPA 8260C	10-13-17	10-13-17	
Bromobenzene	ND	0.20	EPA 8260C	10-13-17	10-13-17	
1,1,2,2-Tetrachloroethane	ND	0.20	EPA 8260C	10-13-17	10-13-17	
1,2,3-Trichloropropane	ND	0.20	EPA 8260C	10-13-17	10-13-17	
n-Propylbenzene	ND	0.20	EPA 8260C	10-13-17	10-13-17	
2-Chlorotoluene	ND	0.20	EPA 8260C	10-13-17	10-13-17	
4-Chlorotoluene	ND	0.20	EPA 8260C	10-13-17	10-13-17	
1,3,5-Trimethylbenzene	ND	0.20	EPA 8260C	10-13-17	10-13-17	
tert-Butylbenzene	ND	0.20	EPA 8260C	10-13-17	10-13-17	
1,2,4-Trimethylbenzene	ND	0.20	EPA 8260C	10-13-17	10-13-17	
sec-Butylbenzene	ND	0.20	EPA 8260C	10-13-17	10-13-17	
1,3-Dichlorobenzene	ND	0.20	EPA 8260C	10-13-17	10-13-17	
p-Isopropyltoluene	ND	0.20	EPA 8260C	10-13-17	10-13-17	
1,4-Dichlorobenzene	ND	0.20	EPA 8260C	10-13-17	10-13-17	
1,2-Dichlorobenzene	ND	0.20	EPA 8260C	10-13-17	10-13-17	
n-Butylbenzene	ND	0.20	EPA 8260C	10-13-17	10-13-17	
1,2-Dibromo-3-chloropropane	ND	1.0	EPA 8260C	10-13-17	10-13-17	
1,2,4-Trichlorobenzene	ND	0.20	EPA 8260C	10-13-17	10-13-17	
Hexachlorobutadiene	ND	0.20	EPA 8260C	10-13-17	10-13-17	
Naphthalene	ND	1.3	EPA 8260C	10-13-17	10-13-17	
1,2,3-Trichlorobenzene	ND	0.20	EPA 8260C	10-13-17	10-13-17	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>91</i>	<i>77-129</i>				
<i>Toluene-d8</i>	<i>96</i>	<i>80-127</i>				
<i>4-Bromofluorobenzene</i>	<i>99</i>	<i>78-125</i>				



Date of Report: October 16, 2017  
 Samples Submitted: October 9, 2017  
 Laboratory Reference: 1710-105  
 Project: 4082-039-01

**VOLATILES EPA 8260C**  
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Matrix: Water  
 Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>RIN-Poly-20171009</b>					
Laboratory ID:	10-105-03					
Dichlorodifluoromethane	ND	0.20	EPA 8260C	10-13-17	10-13-17	
Chloromethane	ND	1.0	EPA 8260C	10-13-17	10-13-17	
Vinyl Chloride	ND	0.20	EPA 8260C	10-13-17	10-13-17	
Bromomethane	ND	0.20	EPA 8260C	10-13-17	10-13-17	
Chloroethane	ND	1.0	EPA 8260C	10-13-17	10-13-17	
Trichlorofluoromethane	ND	0.20	EPA 8260C	10-13-17	10-13-17	
1,1-Dichloroethene	ND	0.20	EPA 8260C	10-13-17	10-13-17	
Acetone	ND	5.0	EPA 8260C	10-13-17	10-13-17	
Iodomethane	ND	2.0	EPA 8260C	10-13-17	10-13-17	
Carbon Disulfide	ND	0.27	EPA 8260C	10-13-17	10-13-17	
Methylene Chloride	ND	1.0	EPA 8260C	10-13-17	10-13-17	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260C	10-13-17	10-13-17	
Methyl t-Butyl Ether	ND	0.20	EPA 8260C	10-13-17	10-13-17	
1,1-Dichloroethane	ND	0.20	EPA 8260C	10-13-17	10-13-17	
Vinyl Acetate	ND	1.3	EPA 8260C	10-13-17	10-13-17	
2,2-Dichloropropane	ND	0.20	EPA 8260C	10-13-17	10-13-17	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260C	10-13-17	10-13-17	
2-Butanone	ND	5.0	EPA 8260C	10-13-17	10-13-17	
Bromochloromethane	ND	0.20	EPA 8260C	10-13-17	10-13-17	
Chloroform	ND	0.20	EPA 8260C	10-13-17	10-13-17	
1,1,1-Trichloroethane	ND	0.20	EPA 8260C	10-13-17	10-13-17	
Carbon Tetrachloride	ND	0.20	EPA 8260C	10-13-17	10-13-17	
1,1-Dichloropropene	ND	0.20	EPA 8260C	10-13-17	10-13-17	
Benzene	ND	0.20	EPA 8260C	10-13-17	10-13-17	
1,2-Dichloroethane	ND	0.20	EPA 8260C	10-13-17	10-13-17	
Trichloroethene	ND	0.20	EPA 8260C	10-13-17	10-13-17	
1,2-Dichloropropane	ND	0.20	EPA 8260C	10-13-17	10-13-17	
Dibromomethane	ND	0.20	EPA 8260C	10-13-17	10-13-17	
Bromodichloromethane	ND	0.20	EPA 8260C	10-13-17	10-13-17	
2-Chloroethyl Vinyl Ether	ND	10	EPA 8260C	10-13-17	10-13-17	
(cis) 1,3-Dichloropropene	ND	0.20	EPA 8260C	10-13-17	10-13-17	
Methyl Isobutyl Ketone	ND	2.5	EPA 8260C	10-13-17	10-13-17	
Toluene	ND	1.0	EPA 8260C	10-13-17	10-13-17	
(trans) 1,3-Dichloropropene	ND	0.20	EPA 8260C	10-13-17	10-13-17	



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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>RIN-Poly-20171009</b>					
Laboratory ID:	10-105-03					
1,1,2-Trichloroethane	ND	0.20	EPA 8260C	10-13-17	10-13-17	
Tetrachloroethene	ND	0.20	EPA 8260C	10-13-17	10-13-17	
1,3-Dichloropropane	ND	0.20	EPA 8260C	10-13-17	10-13-17	
2-Hexanone	ND	2.0	EPA 8260C	10-13-17	10-13-17	
Dibromochloromethane	ND	0.20	EPA 8260C	10-13-17	10-13-17	
1,2-Dibromoethane	ND	0.20	EPA 8260C	10-13-17	10-13-17	
Chlorobenzene	ND	0.20	EPA 8260C	10-13-17	10-13-17	
1,1,1,2-Tetrachloroethane	ND	0.20	EPA 8260C	10-13-17	10-13-17	
Ethylbenzene	ND	0.20	EPA 8260C	10-13-17	10-13-17	
m,p-Xylene	ND	0.40	EPA 8260C	10-13-17	10-13-17	
o-Xylene	ND	0.20	EPA 8260C	10-13-17	10-13-17	
Styrene	ND	0.20	EPA 8260C	10-13-17	10-13-17	
Bromoform	ND	1.0	EPA 8260C	10-13-17	10-13-17	
Isopropylbenzene	ND	0.20	EPA 8260C	10-13-17	10-13-17	
Bromobenzene	ND	0.20	EPA 8260C	10-13-17	10-13-17	
1,1,2,2-Tetrachloroethane	ND	0.20	EPA 8260C	10-13-17	10-13-17	
1,2,3-Trichloropropane	ND	0.20	EPA 8260C	10-13-17	10-13-17	
n-Propylbenzene	ND	0.20	EPA 8260C	10-13-17	10-13-17	
2-Chlorotoluene	ND	0.20	EPA 8260C	10-13-17	10-13-17	
4-Chlorotoluene	ND	0.20	EPA 8260C	10-13-17	10-13-17	
1,3,5-Trimethylbenzene	ND	0.20	EPA 8260C	10-13-17	10-13-17	
tert-Butylbenzene	ND	0.20	EPA 8260C	10-13-17	10-13-17	
1,2,4-Trimethylbenzene	ND	0.20	EPA 8260C	10-13-17	10-13-17	
sec-Butylbenzene	ND	0.20	EPA 8260C	10-13-17	10-13-17	
1,3-Dichlorobenzene	ND	0.20	EPA 8260C	10-13-17	10-13-17	
p-Isopropyltoluene	ND	0.20	EPA 8260C	10-13-17	10-13-17	
1,4-Dichlorobenzene	ND	0.20	EPA 8260C	10-13-17	10-13-17	
1,2-Dichlorobenzene	ND	0.20	EPA 8260C	10-13-17	10-13-17	
n-Butylbenzene	ND	0.20	EPA 8260C	10-13-17	10-13-17	
1,2-Dibromo-3-chloropropane	ND	1.0	EPA 8260C	10-13-17	10-13-17	
1,2,4-Trichlorobenzene	ND	0.20	EPA 8260C	10-13-17	10-13-17	
Hexachlorobutadiene	ND	0.20	EPA 8260C	10-13-17	10-13-17	
Naphthalene	ND	1.3	EPA 8260C	10-13-17	10-13-17	
1,2,3-Trichlorobenzene	ND	0.20	EPA 8260C	10-13-17	10-13-17	
<b>Surrogate:</b>	<b>Percent Recovery</b>	<b>Control Limits</b>				
<i>Dibromofluoromethane</i>	85	77-129				
<i>Toluene-d8</i>	93	80-127				
<i>4-Bromofluorobenzene</i>	98	78-125				



Date of Report: October 16, 2017  
 Samples Submitted: October 9, 2017  
 Laboratory Reference: 1710-105  
 Project: 4082-039-01

**VOLATILES EPA 8260C**  
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Matrix: Water  
 Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>RIN-WLI-20171009</b>					
Laboratory ID:	10-105-04					
Dichlorodifluoromethane	ND	0.20	EPA 8260C	10-13-17	10-13-17	
Chloromethane	ND	1.0	EPA 8260C	10-13-17	10-13-17	
Vinyl Chloride	ND	0.20	EPA 8260C	10-13-17	10-13-17	
Bromomethane	ND	0.20	EPA 8260C	10-13-17	10-13-17	
Chloroethane	ND	1.0	EPA 8260C	10-13-17	10-13-17	
Trichlorofluoromethane	ND	0.20	EPA 8260C	10-13-17	10-13-17	
1,1-Dichloroethene	ND	0.20	EPA 8260C	10-13-17	10-13-17	
Acetone	ND	5.0	EPA 8260C	10-13-17	10-13-17	
Iodomethane	ND	2.0	EPA 8260C	10-13-17	10-13-17	
Carbon Disulfide	ND	0.27	EPA 8260C	10-13-17	10-13-17	
Methylene Chloride	ND	1.0	EPA 8260C	10-13-17	10-13-17	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260C	10-13-17	10-13-17	
Methyl t-Butyl Ether	ND	0.20	EPA 8260C	10-13-17	10-13-17	
1,1-Dichloroethane	ND	0.20	EPA 8260C	10-13-17	10-13-17	
Vinyl Acetate	ND	1.3	EPA 8260C	10-13-17	10-13-17	
2,2-Dichloropropane	ND	0.20	EPA 8260C	10-13-17	10-13-17	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260C	10-13-17	10-13-17	
2-Butanone	ND	5.0	EPA 8260C	10-13-17	10-13-17	
Bromochloromethane	ND	0.20	EPA 8260C	10-13-17	10-13-17	
Chloroform	ND	0.20	EPA 8260C	10-13-17	10-13-17	
1,1,1-Trichloroethane	ND	0.20	EPA 8260C	10-13-17	10-13-17	
Carbon Tetrachloride	ND	0.20	EPA 8260C	10-13-17	10-13-17	
1,1-Dichloropropene	ND	0.20	EPA 8260C	10-13-17	10-13-17	
Benzene	ND	0.20	EPA 8260C	10-13-17	10-13-17	
1,2-Dichloroethane	ND	0.20	EPA 8260C	10-13-17	10-13-17	
Trichloroethene	ND	0.20	EPA 8260C	10-13-17	10-13-17	
1,2-Dichloropropane	ND	0.20	EPA 8260C	10-13-17	10-13-17	
Dibromomethane	ND	0.20	EPA 8260C	10-13-17	10-13-17	
Bromodichloromethane	ND	0.20	EPA 8260C	10-13-17	10-13-17	
2-Chloroethyl Vinyl Ether	ND	10	EPA 8260C	10-13-17	10-13-17	
(cis) 1,3-Dichloropropene	ND	0.20	EPA 8260C	10-13-17	10-13-17	
Methyl Isobutyl Ketone	ND	2.5	EPA 8260C	10-13-17	10-13-17	
Toluene	ND	1.0	EPA 8260C	10-13-17	10-13-17	
(trans) 1,3-Dichloropropene	ND	0.20	EPA 8260C	10-13-17	10-13-17	



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**VOLATILES EPA 8260C**  
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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>RIN-WLI-20171009</b>					
Laboratory ID:	10-105-04					
1,1,2-Trichloroethane	ND	0.20	EPA 8260C	10-13-17	10-13-17	
Tetrachloroethene	ND	0.20	EPA 8260C	10-13-17	10-13-17	
1,3-Dichloropropane	ND	0.20	EPA 8260C	10-13-17	10-13-17	
2-Hexanone	ND	2.0	EPA 8260C	10-13-17	10-13-17	
Dibromochloromethane	ND	0.20	EPA 8260C	10-13-17	10-13-17	
1,2-Dibromoethane	ND	0.20	EPA 8260C	10-13-17	10-13-17	
Chlorobenzene	ND	0.20	EPA 8260C	10-13-17	10-13-17	
1,1,1,2-Tetrachloroethane	ND	0.20	EPA 8260C	10-13-17	10-13-17	
Ethylbenzene	ND	0.20	EPA 8260C	10-13-17	10-13-17	
m,p-Xylene	ND	0.40	EPA 8260C	10-13-17	10-13-17	
o-Xylene	ND	0.20	EPA 8260C	10-13-17	10-13-17	
Styrene	ND	0.20	EPA 8260C	10-13-17	10-13-17	
Bromoform	ND	1.0	EPA 8260C	10-13-17	10-13-17	
Isopropylbenzene	ND	0.20	EPA 8260C	10-13-17	10-13-17	
Bromobenzene	ND	0.20	EPA 8260C	10-13-17	10-13-17	
1,1,2,2-Tetrachloroethane	ND	0.20	EPA 8260C	10-13-17	10-13-17	
1,2,3-Trichloropropane	ND	0.20	EPA 8260C	10-13-17	10-13-17	
n-Propylbenzene	ND	0.20	EPA 8260C	10-13-17	10-13-17	
2-Chlorotoluene	ND	0.20	EPA 8260C	10-13-17	10-13-17	
4-Chlorotoluene	ND	0.20	EPA 8260C	10-13-17	10-13-17	
1,3,5-Trimethylbenzene	ND	0.20	EPA 8260C	10-13-17	10-13-17	
tert-Butylbenzene	ND	0.20	EPA 8260C	10-13-17	10-13-17	
1,2,4-Trimethylbenzene	ND	0.20	EPA 8260C	10-13-17	10-13-17	
sec-Butylbenzene	ND	0.20	EPA 8260C	10-13-17	10-13-17	
1,3-Dichlorobenzene	ND	0.20	EPA 8260C	10-13-17	10-13-17	
p-Isopropyltoluene	ND	0.20	EPA 8260C	10-13-17	10-13-17	
1,4-Dichlorobenzene	ND	0.20	EPA 8260C	10-13-17	10-13-17	
1,2-Dichlorobenzene	ND	0.20	EPA 8260C	10-13-17	10-13-17	
n-Butylbenzene	ND	0.20	EPA 8260C	10-13-17	10-13-17	
1,2-Dibromo-3-chloropropane	ND	1.0	EPA 8260C	10-13-17	10-13-17	
1,2,4-Trichlorobenzene	ND	0.20	EPA 8260C	10-13-17	10-13-17	
Hexachlorobutadiene	ND	0.20	EPA 8260C	10-13-17	10-13-17	
Naphthalene	ND	1.3	EPA 8260C	10-13-17	10-13-17	
1,2,3-Trichlorobenzene	ND	0.20	EPA 8260C	10-13-17	10-13-17	
<b>Surrogate:</b>	<b>Percent Recovery</b>	<b>Control Limits</b>				
<i>Dibromofluoromethane</i>	86	77-129				
<i>Toluene-d8</i>	93	80-127				
<i>4-Bromofluorobenzene</i>	99	78-125				



Date of Report: October 16, 2017  
 Samples Submitted: October 9, 2017  
 Laboratory Reference: 1710-105  
 Project: 4082-039-01

**VOLATILES by EPA 8260C**  
**METHOD BLANK QUALITY CONTROL**  
 page 1 of 2

Matrix: Water  
 Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB1013W1					
Dichlorodifluoromethane	ND	0.20	EPA 8260C	10-13-17	10-13-17	
Chloromethane	ND	1.0	EPA 8260C	10-13-17	10-13-17	
Vinyl Chloride	ND	0.20	EPA 8260C	10-13-17	10-13-17	
Bromomethane	ND	0.20	EPA 8260C	10-13-17	10-13-17	
Chloroethane	ND	1.0	EPA 8260C	10-13-17	10-13-17	
Trichlorofluoromethane	ND	0.20	EPA 8260C	10-13-17	10-13-17	
1,1-Dichloroethene	ND	0.20	EPA 8260C	10-13-17	10-13-17	
Acetone	ND	5.0	EPA 8260C	10-13-17	10-13-17	
Iodomethane	ND	2.0	EPA 8260C	10-13-17	10-13-17	
Carbon Disulfide	ND	0.27	EPA 8260C	10-13-17	10-13-17	
Methylene Chloride	ND	1.0	EPA 8260C	10-13-17	10-13-17	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260C	10-13-17	10-13-17	
Methyl t-Butyl Ether	ND	0.20	EPA 8260C	10-13-17	10-13-17	
1,1-Dichloroethane	ND	0.20	EPA 8260C	10-13-17	10-13-17	
Vinyl Acetate	ND	1.3	EPA 8260C	10-13-17	10-13-17	
2,2-Dichloropropane	ND	0.20	EPA 8260C	10-13-17	10-13-17	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260C	10-13-17	10-13-17	
2-Butanone	ND	5.0	EPA 8260C	10-13-17	10-13-17	
Bromochloromethane	ND	0.20	EPA 8260C	10-13-17	10-13-17	
Chloroform	ND	0.20	EPA 8260C	10-13-17	10-13-17	
1,1,1-Trichloroethane	ND	0.20	EPA 8260C	10-13-17	10-13-17	
Carbon Tetrachloride	ND	0.20	EPA 8260C	10-13-17	10-13-17	
1,1-Dichloropropene	ND	0.20	EPA 8260C	10-13-17	10-13-17	
Benzene	ND	0.20	EPA 8260C	10-13-17	10-13-17	
1,2-Dichloroethane	ND	0.20	EPA 8260C	10-13-17	10-13-17	
Trichloroethene	ND	0.20	EPA 8260C	10-13-17	10-13-17	
1,2-Dichloropropane	ND	0.20	EPA 8260C	10-13-17	10-13-17	
Dibromomethane	ND	0.20	EPA 8260C	10-13-17	10-13-17	
Bromodichloromethane	ND	0.20	EPA 8260C	10-13-17	10-13-17	
2-Chloroethyl Vinyl Ether	ND	10	EPA 8260C	10-13-17	10-13-17	
(cis) 1,3-Dichloropropene	ND	0.20	EPA 8260C	10-13-17	10-13-17	
Methyl Isobutyl Ketone	ND	2.5	EPA 8260C	10-13-17	10-13-17	
Toluene	ND	1.0	EPA 8260C	10-13-17	10-13-17	
(trans) 1,3-Dichloropropene	ND	0.20	EPA 8260C	10-13-17	10-13-17	



Date of Report: October 16, 2017  
 Samples Submitted: October 9, 2017  
 Laboratory Reference: 1710-105  
 Project: 4082-039-01

**VOLATILES by EPA 8260C**  
**METHOD BLANK QUALITY CONTROL**  
 page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:		MB1013W1				
1,1,2-Trichloroethane	ND	0.20	EPA 8260C	10-13-17	10-13-17	
Tetrachloroethene	ND	0.20	EPA 8260C	10-13-17	10-13-17	
1,3-Dichloropropane	ND	0.20	EPA 8260C	10-13-17	10-13-17	
2-Hexanone	ND	2.0	EPA 8260C	10-13-17	10-13-17	
Dibromochloromethane	ND	0.20	EPA 8260C	10-13-17	10-13-17	
1,2-Dibromoethane	ND	0.20	EPA 8260C	10-13-17	10-13-17	
Chlorobenzene	ND	0.20	EPA 8260C	10-13-17	10-13-17	
1,1,1,2-Tetrachloroethane	ND	0.20	EPA 8260C	10-13-17	10-13-17	
Ethylbenzene	ND	0.20	EPA 8260C	10-13-17	10-13-17	
m,p-Xylene	ND	0.40	EPA 8260C	10-13-17	10-13-17	
o-Xylene	ND	0.20	EPA 8260C	10-13-17	10-13-17	
Styrene	ND	0.20	EPA 8260C	10-13-17	10-13-17	
Bromoform	ND	1.0	EPA 8260C	10-13-17	10-13-17	
Isopropylbenzene	ND	0.20	EPA 8260C	10-13-17	10-13-17	
Bromobenzene	ND	0.20	EPA 8260C	10-13-17	10-13-17	
1,1,2,2-Tetrachloroethane	ND	0.20	EPA 8260C	10-13-17	10-13-17	
1,2,3-Trichloropropane	ND	0.20	EPA 8260C	10-13-17	10-13-17	
n-Propylbenzene	ND	0.20	EPA 8260C	10-13-17	10-13-17	
2-Chlorotoluene	ND	0.20	EPA 8260C	10-13-17	10-13-17	
4-Chlorotoluene	ND	0.20	EPA 8260C	10-13-17	10-13-17	
1,3,5-Trimethylbenzene	ND	0.20	EPA 8260C	10-13-17	10-13-17	
tert-Butylbenzene	ND	0.20	EPA 8260C	10-13-17	10-13-17	
1,2,4-Trimethylbenzene	ND	0.20	EPA 8260C	10-13-17	10-13-17	
sec-Butylbenzene	ND	0.20	EPA 8260C	10-13-17	10-13-17	
1,3-Dichlorobenzene	ND	0.20	EPA 8260C	10-13-17	10-13-17	
p-Isopropyltoluene	ND	0.20	EPA 8260C	10-13-17	10-13-17	
1,4-Dichlorobenzene	ND	0.20	EPA 8260C	10-13-17	10-13-17	
1,2-Dichlorobenzene	ND	0.20	EPA 8260C	10-13-17	10-13-17	
n-Butylbenzene	ND	0.20	EPA 8260C	10-13-17	10-13-17	
1,2-Dibromo-3-chloropropane	ND	1.0	EPA 8260C	10-13-17	10-13-17	
1,2,4-Trichlorobenzene	ND	0.20	EPA 8260C	10-13-17	10-13-17	
Hexachlorobutadiene	ND	0.20	EPA 8260C	10-13-17	10-13-17	
Naphthalene	ND	1.3	EPA 8260C	10-13-17	10-13-17	
1,2,3-Trichlorobenzene	ND	0.20	EPA 8260C	10-13-17	10-13-17	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>88</i>	<i>77-129</i>				
<i>Toluene-d8</i>	<i>94</i>	<i>80-127</i>				
<i>4-Bromofluorobenzene</i>	<i>99</i>	<i>78-125</i>				



Date of Report: October 16, 2017  
 Samples Submitted: October 9, 2017  
 Laboratory Reference: 1710-105  
 Project: 4082-039-01

**VOLATILES by EPA 8260C  
 SB/SBD QUALITY CONTROL**

Matrix: Water  
 Units: ug/L

Analyte	Result		Spike Level		Percent Recovery		Recovery	RPD	RPD	Flags
					SB	SBD	Limits	RPD	Limit	
<b>SPIKE BLANKS</b>										
Laboratory ID:	SB1013W1									
	SB	SBD	SB	SBD	SB	SBD				
1,1-Dichloroethene	9.21	9.36	10.0	10.0	92	94	63-127	2	17	
Benzene	9.76	10.2	10.0	10.0	98	102	76-121	4	12	
Trichloroethene	9.02	9.05	10.0	10.0	90	91	64-120	0	15	
Toluene	9.67	9.94	10.0	10.0	97	99	82-120	3	13	
Chlorobenzene	9.75	10.1	10.0	10.0	98	101	80-120	4	14	
<i>Surrogate:</i>										
Dibromofluoromethane					85	86	77-129			
Toluene-d8					94	94	80-127			
4-Bromofluorobenzene					97	99	78-125			





### Data Qualifiers and Abbreviations

- A - Due to a high sample concentration, the amount spiked is insufficient for meaningful MS/MSD recovery data.
  - B - The analyte indicated was also found in the blank sample.
  - C - The duplicate RPD is outside control limits due to high result variability when analyte concentrations are within five times the quantitation limit.
  - E - The value reported exceeds the quantitation range and is an estimate.
  - F - Surrogate recovery data is not available due to the high concentration of coeluting target compounds.
  - H - The analyte indicated is a common laboratory solvent and may have been introduced during sample preparation, and be impacting the sample result.
  - I - Compound recovery is outside of the control limits.
  - J - The value reported was below the practical quantitation limit. The value is an estimate.
  - K - Sample duplicate RPD is outside control limits due to sample inhomogeneity. The sample was re-extracted and re-analyzed with similar results.
  - L - The RPD is outside of the control limits.
  - M - Hydrocarbons in the gasoline range are impacting the diesel range result.
  - M1 - Hydrocarbons in the gasoline range (toluene-naphthalene) are present in the sample.
  - N - Hydrocarbons in the lube oil range are impacting the diesel range result.
  - N1 - Hydrocarbons in diesel range are impacting lube oil range results.
  - O - Hydrocarbons indicative of heavier fuels are present in the sample and are impacting the gasoline result.
  - P - The RPD of the detected concentrations between the two columns is greater than 40.
  - Q - Surrogate recovery is outside of the control limits.
  - S - Surrogate recovery data is not available due to the necessary dilution of the sample.
  - T - The sample chromatogram is not similar to a typical \_\_\_\_\_.
  - U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.
  - U1 - The practical quantitation limit is elevated due to interferences present in the sample.
  - V - Matrix Spike/Matrix Spike Duplicate recoveries are outside control limits due to matrix effects.
  - W - Matrix Spike/Matrix Spike Duplicate RPD are outside control limits due to matrix effects.
  - X - Sample extract treated with a mercury cleanup procedure.
  - X1 - Sample extract treated with a Sulfuric acid/Silica gel cleanup procedure.
  - Y - The calibration verification for this analyte exceeded the 20% drift specified in method 8260C, and therefore the reported result should be considered an estimate. The overall performance of the calibration verification standard met the acceptance criteria of the method.
  - Z -
- ND - Not Detected at PQL  
 PQL - Practical Quantitation Limit  
 RPD - Relative Percent Difference





**Onsite Environmental Inc.**  
 Analytical Laboratory Testing Services  
 14648 NE 95th Street • Redmond, WA 98052  
 Phone: (425) 883-3881 • www.onsite-env.com

# Chain of Custody

Turnaround Request  
 (In working days)  
 (Check One)

- Same Day  1 Day
- 2 Days  3 Days
- Standard (7 Days)  
 (TPH analysis 5 Days)
- 5 DAYS  
 (other)

Laboratory Number: **10-105**

Company: GEI  
 Project Number: 4082-039-01  
 Project Name: Sound Transit Phase II  
 Project Manager: Marsi Beeson  
 Sampled by: CGG/RC

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers
1	FL358-MW3-20171009	10/9/17	935	Water	4
2	DWP-20171009		0520		4
3	PIN-Poly-20171009		936		4
4	PIN-WL-20171009		937		4

Number of Containers	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Gx	NWTPH-Dx ( <input type="checkbox"/> Acid / SG Clean-up)	Volatiles 8260C	Halogenated Volatiles 8260C	EDB EPA 8011 (Waters Only)	Semivolatiles 8270D/SIM (with low-level PAHs)	PAHs 8270D/SIM (low-level)	PCBs 8082A	Organochlorine Pesticides 8081B	Organophosphorus Pesticides 8270D/SIM	Chlorinated Acid Herbicides 8151A	Total RCRA Metals	Total MTCA Metals	TCLP Metals	HEM (oil and grease) 1664A	% Moisture
4					<input checked="" type="checkbox"/>													
4					<input checked="" type="checkbox"/>													
4					<input checked="" type="checkbox"/>													
4					<input checked="" type="checkbox"/>													

Relinquished	Signature	Company	Date	Time	Comments/Special Instructions
Received		GEI	10/9/17	1600	<input checked="" type="checkbox"/> Added 10/11, 17, 23 (5 days)
Relinquished		GEI	10/9/17	1600	
Received					
Relinquished					
Received					

Relinquished

Received

Relinquished

Received

Relinquished

Received

Reviewed/Date

Reviewed/Date

Reviewed/Date

Data Package: Standard  Level III  Level IV

Chromatograms with final report  Electronic Data Deliverables (EDDs)



14648 NE 95<sup>th</sup> Street, Redmond, WA 98052 • (425) 883-3881

October 13, 2017

Marsi Beeson  
GeoEngineers, Inc.  
12000 NW Naito Prkway, Suite 180  
Portland, OR 97209

Re: Analytical Data for Project 4082-039-01  
Laboratory Reference No. 1710-028

Dear Marsi:

Enclosed are the analytical results and associated quality control data for samples submitted on October 3, 2017.

The standard policy of OnSite Environmental, Inc. is to store your samples for 30 days from the date of receipt. If you require longer storage, please contact the laboratory.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning the data, or need additional information, please feel free to call me.

Sincerely,

A handwritten signature in black ink, appearing to read "DB", with a long horizontal flourish extending to the right.

David Baumeister  
Project Manager

Enclosures



---

OnSite Environmental, Inc. 14648 NE 95<sup>th</sup> Street, Redmond, WA 98052 (425) 883-3881

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: October 13, 2017  
Samples Submitted: October 3, 2017  
Laboratory Reference: 1710-028  
Project: 4082-039-01

### Case Narrative

Samples were collected on October 3, 2017 and received by the laboratory on October 3, 2017. They were maintained at the laboratory at a temperature of 2°C to 6°C.

Please note that any and all soil sample results are reported on a dry-weight basis, unless otherwise noted below.

General QA/QC issues associated with the analytical data enclosed in this laboratory report will be indicated with a reference to a comment or explanation on the Data Qualifier page. More complex and involved QA/QC issues will be discussed in detail below.



Date of Report: October 13, 2017  
Samples Submitted: October 3, 2017  
Laboratory Reference: 1710-028  
Project: 4082-039-01

**ANALYTICAL REPORT FOR SAMPLES**

<b>Client ID</b>	<b>Laboratory ID</b>	<b>Matrix</b>	<b>Date Sampled</b>	<b>Date Received</b>	<b>Notes</b>
FL358-MW3-0-0.5	10-028-01	Soil	10-3-17	10-3-17	
FL358-MW3-0.5-1	10-028-02	Soil	10-3-17	10-3-17	
FL358-MW3-4-5	10-028-03	Soil	10-3-17	10-3-17	
FL358-MW3-7-8	10-028-04	Soil	10-3-17	10-3-17	
FL358-MW3-11-12	10-028-05	Soil	10-3-17	10-3-17	
FL358-MW4-0-0.5	10-028-08	Soil	10-3-17	10-3-17	
FL358-MW4-0.5-1	10-028-09	Soil	10-3-17	10-3-17	
FL358-MW4-6.5-7.5	10-028-11	Soil	10-3-17	10-3-17	
FL358-MW4-8.5-9.5	10-028-12	Soil	10-3-17	10-3-17	



Date of Report: October 13, 2017  
 Samples Submitted: October 3, 2017  
 Laboratory Reference: 1710-028  
 Project: 4082-039-01

**VOLATILES EPA 8260C**  
 Page 1 of 2

Matrix: Soil  
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>FL358-MW3-4-5</b>					
<b>Laboratory ID:</b>	<b>10-028-03</b>					
Dichlorodifluoromethane	ND	0.0023	EPA 8260C	10-11-17	10-11-17	
Chloromethane	ND	0.0065	EPA 8260C	10-11-17	10-11-17	
Vinyl Chloride	ND	0.00095	EPA 8260C	10-11-17	10-11-17	
Bromomethane	ND	0.00095	EPA 8260C	10-11-17	10-11-17	
Chloroethane	ND	0.0048	EPA 8260C	10-11-17	10-11-17	
Trichlorofluoromethane	ND	0.00095	EPA 8260C	10-11-17	10-11-17	
1,1-Dichloroethene	ND	0.00095	EPA 8260C	10-11-17	10-11-17	
Acetone	0.012	0.0048	EPA 8260C	10-11-17	10-11-17	
Iodomethane	ND	0.0071	EPA 8260C	10-11-17	10-11-17	
Carbon Disulfide	ND	0.00095	EPA 8260C	10-11-17	10-11-17	
Methylene Chloride	ND	0.0048	EPA 8260C	10-11-17	10-11-17	
(trans) 1,2-Dichloroethene	ND	0.00095	EPA 8260C	10-11-17	10-11-17	
Methyl t-Butyl Ether	ND	0.00095	EPA 8260C	10-11-17	10-11-17	
1,1-Dichloroethane	ND	0.00095	EPA 8260C	10-11-17	10-11-17	
Vinyl Acetate	ND	0.0048	EPA 8260C	10-11-17	10-11-17	
2,2-Dichloropropane	ND	0.00095	EPA 8260C	10-11-17	10-11-17	
(cis) 1,2-Dichloroethene	ND	0.00095	EPA 8260C	10-11-17	10-11-17	
2-Butanone	ND	0.0048	EPA 8260C	10-11-17	10-11-17	
Bromochloromethane	ND	0.00095	EPA 8260C	10-11-17	10-11-17	
Chloroform	ND	0.00095	EPA 8260C	10-11-17	10-11-17	
1,1,1-Trichloroethane	ND	0.00095	EPA 8260C	10-11-17	10-11-17	
Carbon Tetrachloride	ND	0.00095	EPA 8260C	10-11-17	10-11-17	
1,1-Dichloropropene	ND	0.00095	EPA 8260C	10-11-17	10-11-17	
Benzene	ND	0.00095	EPA 8260C	10-11-17	10-11-17	
1,2-Dichloroethane	ND	0.00095	EPA 8260C	10-11-17	10-11-17	
Trichloroethene	ND	0.00095	EPA 8260C	10-11-17	10-11-17	
1,2-Dichloropropane	ND	0.00095	EPA 8260C	10-11-17	10-11-17	
Dibromomethane	ND	0.00095	EPA 8260C	10-11-17	10-11-17	
Bromodichloromethane	ND	0.00095	EPA 8260C	10-11-17	10-11-17	
2-Chloroethyl Vinyl Ether	ND	0.0048	EPA 8260C	10-11-17	10-11-17	
(cis) 1,3-Dichloropropene	ND	0.00095	EPA 8260C	10-11-17	10-11-17	
Methyl Isobutyl Ketone	ND	0.0048	EPA 8260C	10-11-17	10-11-17	
Toluene	ND	0.0048	EPA 8260C	10-11-17	10-11-17	
(trans) 1,3-Dichloropropene	ND	0.00095	EPA 8260C	10-11-17	10-11-17	



Date of Report: October 13, 2017  
 Samples Submitted: October 3, 2017  
 Laboratory Reference: 1710-028  
 Project: 4082-039-01

**VOLATILES EPA 8260C**  
 Page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>FL358-MW3-4-5</b>					
Laboratory ID:	10-028-03					
1,1,2-Trichloroethane	ND	0.00095	EPA 8260C	10-11-17	10-11-17	
Tetrachloroethene	ND	0.00095	EPA 8260C	10-11-17	10-11-17	
1,3-Dichloropropane	ND	0.00095	EPA 8260C	10-11-17	10-11-17	
2-Hexanone	ND	0.0048	EPA 8260C	10-11-17	10-11-17	
Dibromochloromethane	ND	0.00095	EPA 8260C	10-11-17	10-11-17	
1,2-Dibromoethane	ND	0.00095	EPA 8260C	10-11-17	10-11-17	
Chlorobenzene	ND	0.00095	EPA 8260C	10-11-17	10-11-17	
1,1,1,2-Tetrachloroethane	ND	0.00095	EPA 8260C	10-11-17	10-11-17	
Ethylbenzene	ND	0.00095	EPA 8260C	10-11-17	10-11-17	
m,p-Xylene	ND	0.0019	EPA 8260C	10-11-17	10-11-17	
o-Xylene	ND	0.00095	EPA 8260C	10-11-17	10-11-17	
Styrene	ND	0.00095	EPA 8260C	10-11-17	10-11-17	
Bromoform	ND	0.0048	EPA 8260C	10-11-17	10-11-17	
Isopropylbenzene	ND	0.00095	EPA 8260C	10-11-17	10-11-17	
Bromobenzene	ND	0.00095	EPA 8260C	10-11-17	10-11-17	
1,1,2,2-Tetrachloroethane	ND	0.00095	EPA 8260C	10-11-17	10-11-17	
1,2,3-Trichloropropane	ND	0.00095	EPA 8260C	10-11-17	10-11-17	
n-Propylbenzene	ND	0.00095	EPA 8260C	10-11-17	10-11-17	
2-Chlorotoluene	ND	0.00095	EPA 8260C	10-11-17	10-11-17	
4-Chlorotoluene	ND	0.00095	EPA 8260C	10-11-17	10-11-17	
1,3,5-Trimethylbenzene	ND	0.00095	EPA 8260C	10-11-17	10-11-17	
tert-Butylbenzene	ND	0.00095	EPA 8260C	10-11-17	10-11-17	
1,2,4-Trimethylbenzene	ND	0.00095	EPA 8260C	10-11-17	10-11-17	
sec-Butylbenzene	ND	0.00095	EPA 8260C	10-11-17	10-11-17	
1,3-Dichlorobenzene	ND	0.00095	EPA 8260C	10-11-17	10-11-17	
p-Isopropyltoluene	ND	0.00095	EPA 8260C	10-11-17	10-11-17	
1,4-Dichlorobenzene	ND	0.00095	EPA 8260C	10-11-17	10-11-17	
1,2-Dichlorobenzene	ND	0.00095	EPA 8260C	10-11-17	10-11-17	
n-Butylbenzene	ND	0.00095	EPA 8260C	10-11-17	10-11-17	
1,2-Dibromo-3-chloropropane	ND	0.0048	EPA 8260C	10-11-17	10-11-17	
1,2,4-Trichlorobenzene	ND	0.00095	EPA 8260C	10-11-17	10-11-17	
Hexachlorobutadiene	ND	0.0048	EPA 8260C	10-11-17	10-11-17	
Naphthalene	ND	0.00095	EPA 8260C	10-11-17	10-11-17	
1,2,3-Trichlorobenzene	ND	0.00095	EPA 8260C	10-11-17	10-11-17	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>120</i>	<i>73-134</i>				
<i>Toluene-d8</i>	<i>117</i>	<i>81-124</i>				
<i>4-Bromofluorobenzene</i>	<i>114</i>	<i>80-131</i>				



Date of Report: October 13, 2017  
 Samples Submitted: October 3, 2017  
 Laboratory Reference: 1710-028  
 Project: 4082-039-01

**VOLATILES EPA 8260C**  
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Matrix: Soil  
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>FL358-MW3-7-8</b>					
Laboratory ID:	10-028-04					
Dichlorodifluoromethane	ND	0.0021	EPA 8260C	10-11-17	10-11-17	
Chloromethane	ND	0.0061	EPA 8260C	10-11-17	10-11-17	
Vinyl Chloride	ND	0.00089	EPA 8260C	10-11-17	10-11-17	
Bromomethane	ND	0.00089	EPA 8260C	10-11-17	10-11-17	
Chloroethane	ND	0.0045	EPA 8260C	10-11-17	10-11-17	
Trichlorofluoromethane	ND	0.00089	EPA 8260C	10-11-17	10-11-17	
1,1-Dichloroethene	ND	0.00089	EPA 8260C	10-11-17	10-11-17	
Acetone	0.10	0.0045	EPA 8260C	10-11-17	10-11-17	
Iodomethane	ND	0.0066	EPA 8260C	10-11-17	10-11-17	
Carbon Disulfide	ND	0.00089	EPA 8260C	10-11-17	10-11-17	
Methylene Chloride	ND	0.0045	EPA 8260C	10-11-17	10-11-17	
(trans) 1,2-Dichloroethene	ND	0.00089	EPA 8260C	10-11-17	10-11-17	
Methyl t-Butyl Ether	ND	0.00089	EPA 8260C	10-11-17	10-11-17	
1,1-Dichloroethane	ND	0.00089	EPA 8260C	10-11-17	10-11-17	
Vinyl Acetate	ND	0.0045	EPA 8260C	10-11-17	10-11-17	
2,2-Dichloropropane	ND	0.00089	EPA 8260C	10-11-17	10-11-17	
(cis) 1,2-Dichloroethene	ND	0.00089	EPA 8260C	10-11-17	10-11-17	
2-Butanone	0.015	0.0045	EPA 8260C	10-11-17	10-11-17	
Bromochloromethane	ND	0.00089	EPA 8260C	10-11-17	10-11-17	
Chloroform	ND	0.00089	EPA 8260C	10-11-17	10-11-17	
1,1,1-Trichloroethane	ND	0.00089	EPA 8260C	10-11-17	10-11-17	
Carbon Tetrachloride	ND	0.00089	EPA 8260C	10-11-17	10-11-17	
1,1-Dichloropropene	ND	0.00089	EPA 8260C	10-11-17	10-11-17	
Benzene	ND	0.00089	EPA 8260C	10-11-17	10-11-17	
1,2-Dichloroethane	ND	0.00089	EPA 8260C	10-11-17	10-11-17	
Trichloroethene	ND	0.00089	EPA 8260C	10-11-17	10-11-17	
1,2-Dichloropropane	ND	0.00089	EPA 8260C	10-11-17	10-11-17	
Dibromomethane	ND	0.00089	EPA 8260C	10-11-17	10-11-17	
Bromodichloromethane	ND	0.00089	EPA 8260C	10-11-17	10-11-17	
2-Chloroethyl Vinyl Ether	ND	0.0045	EPA 8260C	10-11-17	10-11-17	
(cis) 1,3-Dichloropropene	ND	0.00089	EPA 8260C	10-11-17	10-11-17	
Methyl Isobutyl Ketone	ND	0.0045	EPA 8260C	10-11-17	10-11-17	
Toluene	ND	0.0045	EPA 8260C	10-11-17	10-11-17	
(trans) 1,3-Dichloropropene	ND	0.00089	EPA 8260C	10-11-17	10-11-17	



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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>FL358-MW3-7-8</b>					
Laboratory ID:	10-028-04					
1,1,2-Trichloroethane	ND	0.00089	EPA 8260C	10-11-17	10-11-17	
Tetrachloroethene	ND	0.00089	EPA 8260C	10-11-17	10-11-17	
1,3-Dichloropropane	ND	0.00089	EPA 8260C	10-11-17	10-11-17	
2-Hexanone	ND	0.0045	EPA 8260C	10-11-17	10-11-17	
Dibromochloromethane	ND	0.00089	EPA 8260C	10-11-17	10-11-17	
1,2-Dibromoethane	ND	0.00089	EPA 8260C	10-11-17	10-11-17	
Chlorobenzene	ND	0.00089	EPA 8260C	10-11-17	10-11-17	
1,1,1,2-Tetrachloroethane	ND	0.00089	EPA 8260C	10-11-17	10-11-17	
Ethylbenzene	ND	0.00089	EPA 8260C	10-11-17	10-11-17	
m,p-Xylene	ND	0.0018	EPA 8260C	10-11-17	10-11-17	
o-Xylene	ND	0.00089	EPA 8260C	10-11-17	10-11-17	
Styrene	ND	0.00089	EPA 8260C	10-11-17	10-11-17	
Bromoform	ND	0.0045	EPA 8260C	10-11-17	10-11-17	
Isopropylbenzene	ND	0.00089	EPA 8260C	10-11-17	10-11-17	
Bromobenzene	ND	0.00089	EPA 8260C	10-11-17	10-11-17	
1,1,2,2-Tetrachloroethane	ND	0.00089	EPA 8260C	10-11-17	10-11-17	
1,2,3-Trichloropropane	ND	0.00089	EPA 8260C	10-11-17	10-11-17	
n-Propylbenzene	ND	0.00089	EPA 8260C	10-11-17	10-11-17	
2-Chlorotoluene	ND	0.00089	EPA 8260C	10-11-17	10-11-17	
4-Chlorotoluene	ND	0.00089	EPA 8260C	10-11-17	10-11-17	
1,3,5-Trimethylbenzene	ND	0.00089	EPA 8260C	10-11-17	10-11-17	
tert-Butylbenzene	ND	0.00089	EPA 8260C	10-11-17	10-11-17	
1,2,4-Trimethylbenzene	ND	0.00089	EPA 8260C	10-11-17	10-11-17	
sec-Butylbenzene	ND	0.00089	EPA 8260C	10-11-17	10-11-17	
1,3-Dichlorobenzene	ND	0.00089	EPA 8260C	10-11-17	10-11-17	
p-Isopropyltoluene	0.0014	0.00089	EPA 8260C	10-11-17	10-11-17	
1,4-Dichlorobenzene	ND	0.00089	EPA 8260C	10-11-17	10-11-17	
1,2-Dichlorobenzene	ND	0.00089	EPA 8260C	10-11-17	10-11-17	
n-Butylbenzene	ND	0.00089	EPA 8260C	10-11-17	10-11-17	
1,2-Dibromo-3-chloropropane	ND	0.0045	EPA 8260C	10-11-17	10-11-17	
1,2,4-Trichlorobenzene	ND	0.00089	EPA 8260C	10-11-17	10-11-17	
Hexachlorobutadiene	ND	0.0045	EPA 8260C	10-11-17	10-11-17	
Naphthalene	ND	0.00089	EPA 8260C	10-11-17	10-11-17	
1,2,3-Trichlorobenzene	ND	0.00089	EPA 8260C	10-11-17	10-11-17	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>124</i>	<i>73-134</i>				
<i>Toluene-d8</i>	<i>121</i>	<i>81-124</i>				
<i>4-Bromofluorobenzene</i>	<i>118</i>	<i>80-131</i>				



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 Project: 4082-039-01

**VOLATILES EPA 8260C**  
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Matrix: Soil  
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>FL358-MW3-11-12</b>					
Laboratory ID:	10-028-05					
Dichlorodifluoromethane	ND	0.0019	EPA 8260C	10-11-17	10-11-17	
Chloromethane	ND	0.0053	EPA 8260C	10-11-17	10-11-17	
Vinyl Chloride	ND	0.00078	EPA 8260C	10-11-17	10-11-17	
Bromomethane	ND	0.00078	EPA 8260C	10-11-17	10-11-17	
Chloroethane	ND	0.0039	EPA 8260C	10-11-17	10-11-17	
Trichlorofluoromethane	ND	0.00078	EPA 8260C	10-11-17	10-11-17	
1,1-Dichloroethene	ND	0.00078	EPA 8260C	10-11-17	10-11-17	
Acetone	0.044	0.0039	EPA 8260C	10-11-17	10-11-17	
Iodomethane	ND	0.0057	EPA 8260C	10-11-17	10-11-17	
Carbon Disulfide	0.0012	0.00078	EPA 8260C	10-11-17	10-11-17	
Methylene Chloride	ND	0.0039	EPA 8260C	10-11-17	10-11-17	
(trans) 1,2-Dichloroethene	ND	0.00078	EPA 8260C	10-11-17	10-11-17	
Methyl t-Butyl Ether	ND	0.00078	EPA 8260C	10-11-17	10-11-17	
1,1-Dichloroethane	ND	0.00078	EPA 8260C	10-11-17	10-11-17	
Vinyl Acetate	ND	0.0039	EPA 8260C	10-11-17	10-11-17	
2,2-Dichloropropane	ND	0.00078	EPA 8260C	10-11-17	10-11-17	
(cis) 1,2-Dichloroethene	ND	0.00078	EPA 8260C	10-11-17	10-11-17	
2-Butanone	0.0078	0.0039	EPA 8260C	10-11-17	10-11-17	
Bromochloromethane	ND	0.00078	EPA 8260C	10-11-17	10-11-17	
Chloroform	ND	0.00078	EPA 8260C	10-11-17	10-11-17	
1,1,1-Trichloroethane	ND	0.00078	EPA 8260C	10-11-17	10-11-17	
Carbon Tetrachloride	ND	0.00078	EPA 8260C	10-11-17	10-11-17	
1,1-Dichloropropene	ND	0.00078	EPA 8260C	10-11-17	10-11-17	
Benzene	ND	0.00078	EPA 8260C	10-11-17	10-11-17	
1,2-Dichloroethane	ND	0.00078	EPA 8260C	10-11-17	10-11-17	
Trichloroethene	ND	0.00078	EPA 8260C	10-11-17	10-11-17	
1,2-Dichloropropane	ND	0.00078	EPA 8260C	10-11-17	10-11-17	
Dibromomethane	ND	0.00078	EPA 8260C	10-11-17	10-11-17	
Bromodichloromethane	ND	0.00078	EPA 8260C	10-11-17	10-11-17	
2-Chloroethyl Vinyl Ether	ND	0.0039	EPA 8260C	10-11-17	10-11-17	
(cis) 1,3-Dichloropropene	ND	0.00078	EPA 8260C	10-11-17	10-11-17	
Methyl Isobutyl Ketone	ND	0.0039	EPA 8260C	10-11-17	10-11-17	
Toluene	ND	0.0039	EPA 8260C	10-11-17	10-11-17	
(trans) 1,3-Dichloropropene	ND	0.00078	EPA 8260C	10-11-17	10-11-17	



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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>FL358-MW3-11-12</b>					
Laboratory ID:	10-028-05					
1,1,2-Trichloroethane	ND	0.00078	EPA 8260C	10-11-17	10-11-17	
Tetrachloroethene	ND	0.00078	EPA 8260C	10-11-17	10-11-17	
1,3-Dichloropropane	ND	0.00078	EPA 8260C	10-11-17	10-11-17	
2-Hexanone	ND	0.0039	EPA 8260C	10-11-17	10-11-17	
Dibromochloromethane	ND	0.00078	EPA 8260C	10-11-17	10-11-17	
1,2-Dibromoethane	ND	0.00078	EPA 8260C	10-11-17	10-11-17	
Chlorobenzene	ND	0.00078	EPA 8260C	10-11-17	10-11-17	
1,1,1,2-Tetrachloroethane	ND	0.00078	EPA 8260C	10-11-17	10-11-17	
Ethylbenzene	ND	0.00078	EPA 8260C	10-11-17	10-11-17	
m,p-Xylene	ND	0.0016	EPA 8260C	10-11-17	10-11-17	
o-Xylene	ND	0.00078	EPA 8260C	10-11-17	10-11-17	
Styrene	ND	0.00078	EPA 8260C	10-11-17	10-11-17	
Bromoform	ND	0.0039	EPA 8260C	10-11-17	10-11-17	
Isopropylbenzene	ND	0.00078	EPA 8260C	10-11-17	10-11-17	
Bromobenzene	ND	0.00078	EPA 8260C	10-11-17	10-11-17	
1,1,2,2-Tetrachloroethane	ND	0.00078	EPA 8260C	10-11-17	10-11-17	
1,2,3-Trichloropropane	ND	0.00078	EPA 8260C	10-11-17	10-11-17	
n-Propylbenzene	ND	0.00078	EPA 8260C	10-11-17	10-11-17	
2-Chlorotoluene	ND	0.00078	EPA 8260C	10-11-17	10-11-17	
4-Chlorotoluene	ND	0.00078	EPA 8260C	10-11-17	10-11-17	
1,3,5-Trimethylbenzene	ND	0.00078	EPA 8260C	10-11-17	10-11-17	
tert-Butylbenzene	ND	0.00078	EPA 8260C	10-11-17	10-11-17	
1,2,4-Trimethylbenzene	ND	0.00078	EPA 8260C	10-11-17	10-11-17	
sec-Butylbenzene	ND	0.00078	EPA 8260C	10-11-17	10-11-17	
1,3-Dichlorobenzene	ND	0.00078	EPA 8260C	10-11-17	10-11-17	
p-Isopropyltoluene	0.0029	0.00078	EPA 8260C	10-11-17	10-11-17	
1,4-Dichlorobenzene	ND	0.00078	EPA 8260C	10-11-17	10-11-17	
1,2-Dichlorobenzene	ND	0.00078	EPA 8260C	10-11-17	10-11-17	
n-Butylbenzene	ND	0.00078	EPA 8260C	10-11-17	10-11-17	
1,2-Dibromo-3-chloropropane	ND	0.0039	EPA 8260C	10-11-17	10-11-17	
1,2,4-Trichlorobenzene	ND	0.00078	EPA 8260C	10-11-17	10-11-17	
Hexachlorobutadiene	ND	0.0039	EPA 8260C	10-11-17	10-11-17	
Naphthalene	ND	0.00078	EPA 8260C	10-11-17	10-11-17	
1,2,3-Trichlorobenzene	ND	0.00078	EPA 8260C	10-11-17	10-11-17	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>127</i>	<i>73-134</i>				
<i>Toluene-d8</i>	<i>120</i>	<i>81-124</i>				
<i>4-Bromofluorobenzene</i>	<i>114</i>	<i>80-131</i>				



Date of Report: October 13, 2017  
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 Project: 4082-039-01

**VOLATILES EPA 8260C**  
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Matrix: Soil  
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>FL358-MW4-6.5-7.5</b>					
Laboratory ID:	10-028-11					
Dichlorodifluoromethane	ND	0.0024	EPA 8260C	10-11-17	10-11-17	
Chloromethane	ND	0.0069	EPA 8260C	10-11-17	10-11-17	
Vinyl Chloride	ND	0.0010	EPA 8260C	10-11-17	10-11-17	
Bromomethane	ND	0.0010	EPA 8260C	10-11-17	10-11-17	
Chloroethane	ND	0.0051	EPA 8260C	10-11-17	10-11-17	
Trichlorofluoromethane	ND	0.0010	EPA 8260C	10-11-17	10-11-17	
1,1-Dichloroethene	ND	0.0010	EPA 8260C	10-11-17	10-11-17	
Acetone	0.29	0.0051	EPA 8260C	10-11-17	10-11-17	
Iodomethane	ND	0.0075	EPA 8260C	10-11-17	10-11-17	
Carbon Disulfide	0.0012	0.0010	EPA 8260C	10-11-17	10-11-17	
Methylene Chloride	ND	0.0051	EPA 8260C	10-11-17	10-11-17	
(trans) 1,2-Dichloroethene	ND	0.0010	EPA 8260C	10-11-17	10-11-17	
Methyl t-Butyl Ether	ND	0.0010	EPA 8260C	10-11-17	10-11-17	
1,1-Dichloroethane	ND	0.0010	EPA 8260C	10-11-17	10-11-17	
Vinyl Acetate	ND	0.0051	EPA 8260C	10-11-17	10-11-17	
2,2-Dichloropropane	ND	0.0010	EPA 8260C	10-11-17	10-11-17	
(cis) 1,2-Dichloroethene	ND	0.0010	EPA 8260C	10-11-17	10-11-17	
2-Butanone	0.056	0.0051	EPA 8260C	10-11-17	10-11-17	
Bromochloromethane	ND	0.0010	EPA 8260C	10-11-17	10-11-17	
Chloroform	ND	0.0010	EPA 8260C	10-11-17	10-11-17	
1,1,1-Trichloroethane	ND	0.0010	EPA 8260C	10-11-17	10-11-17	
Carbon Tetrachloride	ND	0.0010	EPA 8260C	10-11-17	10-11-17	
1,1-Dichloropropene	ND	0.0010	EPA 8260C	10-11-17	10-11-17	
Benzene	ND	0.0010	EPA 8260C	10-11-17	10-11-17	
1,2-Dichloroethane	ND	0.0010	EPA 8260C	10-11-17	10-11-17	
Trichloroethene	ND	0.0010	EPA 8260C	10-11-17	10-11-17	
1,2-Dichloropropane	ND	0.0010	EPA 8260C	10-11-17	10-11-17	
Dibromomethane	ND	0.0010	EPA 8260C	10-11-17	10-11-17	
Bromodichloromethane	ND	0.0010	EPA 8260C	10-11-17	10-11-17	
2-Chloroethyl Vinyl Ether	ND	0.0051	EPA 8260C	10-11-17	10-11-17	
(cis) 1,3-Dichloropropene	ND	0.0010	EPA 8260C	10-11-17	10-11-17	
Methyl Isobutyl Ketone	ND	0.0051	EPA 8260C	10-11-17	10-11-17	
Toluene	ND	0.0051	EPA 8260C	10-11-17	10-11-17	
(trans) 1,3-Dichloropropene	ND	0.0010	EPA 8260C	10-11-17	10-11-17	



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 Project: 4082-039-01

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>FL358-MW4-6.5-7.5</b>					
Laboratory ID:	10-028-11					
1,1,2-Trichloroethane	ND	0.0010	EPA 8260C	10-11-17	10-11-17	
Tetrachloroethene	ND	0.0010	EPA 8260C	10-11-17	10-11-17	
1,3-Dichloropropane	ND	0.0010	EPA 8260C	10-11-17	10-11-17	
2-Hexanone	ND	0.0051	EPA 8260C	10-11-17	10-11-17	
Dibromochloromethane	ND	0.0010	EPA 8260C	10-11-17	10-11-17	
1,2-Dibromoethane	ND	0.0010	EPA 8260C	10-11-17	10-11-17	
Chlorobenzene	ND	0.0010	EPA 8260C	10-11-17	10-11-17	
1,1,1,2-Tetrachloroethane	ND	0.0010	EPA 8260C	10-11-17	10-11-17	
Ethylbenzene	0.0022	0.0010	EPA 8260C	10-11-17	10-11-17	
m,p-Xylene	ND	0.0020	EPA 8260C	10-11-17	10-11-17	
o-Xylene	ND	0.0010	EPA 8260C	10-11-17	10-11-17	
Styrene	ND	0.0010	EPA 8260C	10-11-17	10-11-17	
Bromoform	ND	0.0051	EPA 8260C	10-11-17	10-11-17	
Isopropylbenzene	ND	0.0010	EPA 8260C	10-11-17	10-11-17	
Bromobenzene	ND	0.065	EPA 8260C	10-12-17	10-12-17	
1,1,2,2-Tetrachloroethane	ND	0.065	EPA 8260C	10-12-17	10-12-17	
1,2,3-Trichloropropane	ND	0.065	EPA 8260C	10-12-17	10-12-17	
n-Propylbenzene	ND	0.065	EPA 8260C	10-12-17	10-12-17	
2-Chlorotoluene	ND	0.065	EPA 8260C	10-12-17	10-12-17	
4-Chlorotoluene	ND	0.065	EPA 8260C	10-12-17	10-12-17	
1,3,5-Trimethylbenzene	ND	0.065	EPA 8260C	10-12-17	10-12-17	
tert-Butylbenzene	ND	0.065	EPA 8260C	10-12-17	10-12-17	
1,2,4-Trimethylbenzene	ND	0.065	EPA 8260C	10-12-17	10-12-17	
sec-Butylbenzene	ND	0.065	EPA 8260C	10-12-17	10-12-17	
1,3-Dichlorobenzene	ND	0.065	EPA 8260C	10-12-17	10-12-17	
p-Isopropyltoluene	ND	0.065	EPA 8260C	10-12-17	10-12-17	
1,4-Dichlorobenzene	ND	0.065	EPA 8260C	10-12-17	10-12-17	
1,2-Dichlorobenzene	ND	0.065	EPA 8260C	10-12-17	10-12-17	
n-Butylbenzene	ND	0.065	EPA 8260C	10-12-17	10-12-17	
1,2-Dibromo-3-chloropropane	ND	0.32	EPA 8260C	10-12-17	10-12-17	
1,2,4-Trichlorobenzene	ND	0.065	EPA 8260C	10-12-17	10-12-17	
Hexachlorobutadiene	ND	0.32	EPA 8260C	10-12-17	10-12-17	
Naphthalene	ND	0.065	EPA 8260C	10-12-17	10-12-17	
1,2,3-Trichlorobenzene	ND	0.065	EPA 8260C	10-12-17	10-12-17	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>125</i>	<i>73-134</i>				
<i>Toluene-d8</i>	<i>117</i>	<i>81-124</i>				
<i>4-Bromofluorobenzene</i>	<i>99</i>	<i>80-131</i>				



Date of Report: October 13, 2017  
 Samples Submitted: October 3, 2017  
 Laboratory Reference: 1710-028  
 Project: 4082-039-01

**VOLATILES EPA 8260C**

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Matrix: Soil  
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>FL358-MW4-8.5-9.5</b>					
Laboratory ID:	10-028-12					
Dichlorodifluoromethane	ND	0.0025	EPA 8260C	10-12-17	10-12-17	
Chloromethane	ND	0.0067	EPA 8260C	10-12-17	10-12-17	
Vinyl Chloride	ND	0.0012	EPA 8260C	10-12-17	10-12-17	
Bromomethane	ND	0.00094	EPA 8260C	10-12-17	10-12-17	
Chloroethane	ND	0.0047	EPA 8260C	10-12-17	10-12-17	
Trichlorofluoromethane	ND	0.00094	EPA 8260C	10-12-17	10-12-17	
1,1-Dichloroethene	ND	0.00094	EPA 8260C	10-12-17	10-12-17	
Acetone	0.029	0.0047	EPA 8260C	10-12-17	10-12-17	
Iodomethane	ND	0.0067	EPA 8260C	10-12-17	10-12-17	
Carbon Disulfide	ND	0.00094	EPA 8260C	10-12-17	10-12-17	
Methylene Chloride	ND	0.0047	EPA 8260C	10-12-17	10-12-17	
(trans) 1,2-Dichloroethene	ND	0.00094	EPA 8260C	10-12-17	10-12-17	
Methyl t-Butyl Ether	ND	0.00094	EPA 8260C	10-12-17	10-12-17	
1,1-Dichloroethane	ND	0.00094	EPA 8260C	10-12-17	10-12-17	
Vinyl Acetate	ND	0.0047	EPA 8260C	10-12-17	10-12-17	
2,2-Dichloropropane	ND	0.00094	EPA 8260C	10-12-17	10-12-17	
(cis) 1,2-Dichloroethene	ND	0.00094	EPA 8260C	10-12-17	10-12-17	
2-Butanone	ND	0.0047	EPA 8260C	10-12-17	10-12-17	
Bromochloromethane	ND	0.00094	EPA 8260C	10-12-17	10-12-17	
Chloroform	ND	0.00094	EPA 8260C	10-12-17	10-12-17	
1,1,1-Trichloroethane	ND	0.00094	EPA 8260C	10-12-17	10-12-17	
Carbon Tetrachloride	ND	0.00094	EPA 8260C	10-12-17	10-12-17	
1,1-Dichloropropene	ND	0.00094	EPA 8260C	10-12-17	10-12-17	
Benzene	ND	0.00094	EPA 8260C	10-12-17	10-12-17	
1,2-Dichloroethane	ND	0.00094	EPA 8260C	10-12-17	10-12-17	
Trichloroethene	ND	0.00094	EPA 8260C	10-12-17	10-12-17	
1,2-Dichloropropane	ND	0.00094	EPA 8260C	10-12-17	10-12-17	
Dibromomethane	ND	0.00094	EPA 8260C	10-12-17	10-12-17	
Bromodichloromethane	ND	0.00094	EPA 8260C	10-12-17	10-12-17	
2-Chloroethyl Vinyl Ether	ND	0.0047	EPA 8260C	10-12-17	10-12-17	
(cis) 1,3-Dichloropropene	ND	0.00094	EPA 8260C	10-12-17	10-12-17	
Methyl Isobutyl Ketone	ND	0.0047	EPA 8260C	10-12-17	10-12-17	
Toluene	ND	0.0047	EPA 8260C	10-12-17	10-12-17	
(trans) 1,3-Dichloropropene	ND	0.00094	EPA 8260C	10-12-17	10-12-17	



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**VOLATILES EPA 8260C**  
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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>FL358-MW4-8.5-9.5</b>					
Laboratory ID:	10-028-12					
1,1,2-Trichloroethane	ND	0.00094	EPA 8260C	10-12-17	10-12-17	
Tetrachloroethene	ND	0.00094	EPA 8260C	10-12-17	10-12-17	
1,3-Dichloropropane	ND	0.00094	EPA 8260C	10-12-17	10-12-17	
2-Hexanone	ND	0.0047	EPA 8260C	10-12-17	10-12-17	
Dibromochloromethane	ND	0.00094	EPA 8260C	10-12-17	10-12-17	
1,2-Dibromoethane	ND	0.00094	EPA 8260C	10-12-17	10-12-17	
Chlorobenzene	ND	0.00094	EPA 8260C	10-12-17	10-12-17	
1,1,1,2-Tetrachloroethane	ND	0.00094	EPA 8260C	10-12-17	10-12-17	
Ethylbenzene	ND	0.00094	EPA 8260C	10-12-17	10-12-17	
m,p-Xylene	ND	0.0019	EPA 8260C	10-12-17	10-12-17	
o-Xylene	ND	0.00094	EPA 8260C	10-12-17	10-12-17	
Styrene	ND	0.00094	EPA 8260C	10-12-17	10-12-17	
Bromoform	ND	0.0047	EPA 8260C	10-12-17	10-12-17	
Isopropylbenzene	ND	0.00094	EPA 8260C	10-12-17	10-12-17	
Bromobenzene	ND	0.00094	EPA 8260C	10-12-17	10-12-17	
1,1,2,2-Tetrachloroethane	ND	0.00094	EPA 8260C	10-12-17	10-12-17	
1,2,3-Trichloropropane	ND	0.00094	EPA 8260C	10-12-17	10-12-17	
n-Propylbenzene	ND	0.00094	EPA 8260C	10-12-17	10-12-17	
2-Chlorotoluene	ND	0.00094	EPA 8260C	10-12-17	10-12-17	
4-Chlorotoluene	ND	0.00094	EPA 8260C	10-12-17	10-12-17	
1,3,5-Trimethylbenzene	ND	0.00094	EPA 8260C	10-12-17	10-12-17	
tert-Butylbenzene	ND	0.00094	EPA 8260C	10-12-17	10-12-17	
1,2,4-Trimethylbenzene	ND	0.00094	EPA 8260C	10-12-17	10-12-17	
sec-Butylbenzene	ND	0.00094	EPA 8260C	10-12-17	10-12-17	
1,3-Dichlorobenzene	ND	0.00094	EPA 8260C	10-12-17	10-12-17	
p-Isopropyltoluene	ND	0.00094	EPA 8260C	10-12-17	10-12-17	
1,4-Dichlorobenzene	ND	0.00094	EPA 8260C	10-12-17	10-12-17	
1,2-Dichlorobenzene	ND	0.00094	EPA 8260C	10-12-17	10-12-17	
n-Butylbenzene	ND	0.00094	EPA 8260C	10-12-17	10-12-17	
1,2-Dibromo-3-chloropropane	ND	0.0047	EPA 8260C	10-12-17	10-12-17	
1,2,4-Trichlorobenzene	ND	0.00094	EPA 8260C	10-12-17	10-12-17	
Hexachlorobutadiene	ND	0.0047	EPA 8260C	10-12-17	10-12-17	
Naphthalene	ND	0.00094	EPA 8260C	10-12-17	10-12-17	
1,2,3-Trichlorobenzene	ND	0.00094	EPA 8260C	10-12-17	10-12-17	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>110</i>	<i>73-134</i>				
<i>Toluene-d8</i>	<i>117</i>	<i>81-124</i>				
<i>4-Bromofluorobenzene</i>	<i>126</i>	<i>80-131</i>				



Date of Report: October 13, 2017  
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 Laboratory Reference: 1710-028  
 Project: 4082-039-01

**TOTAL METALS  
 EPA 6010C/6020A**

Matrix: Soil  
 Units: mg/kg (ppm)

<b>Analyte</b>	<b>Result</b>	<b>PQL</b>	<b>EPA Method</b>	<b>Date Prepared</b>	<b>Date Analyzed</b>	<b>Flags</b>
Lab ID: 10-028-01						
<b>Client ID: FL358-MW3-0-0.5</b>						
Arsenic	6.2	2.7	6020A	10-6-17	10-10-17	
Lead	ND	5.3	6010C	10-6-17	10-6-17	
Lab ID: 10-028-02						
<b>Client ID: FL358-MW3-0.5-1</b>						
Arsenic	ND	2.7	6020A	10-6-17	10-10-17	
Lead	ND	5.3	6010C	10-6-17	10-6-17	
Lab ID: 10-028-08						
<b>Client ID: FL358-MW4-0-0.5</b>						
Arsenic	ND	2.8	6020A	10-6-17	10-10-17	
Lead	ND	5.5	6010C	10-6-17	10-6-17	
Lab ID: 10-028-09						
<b>Client ID: FL358-MW4-0.5-1</b>						
Arsenic	ND	2.8	6020A	10-6-17	10-10-17	
Lead	ND	5.5	6010C	10-6-17	10-6-17	



Date of Report: October 13, 2017  
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 Project: 4082-039-01

**VOLATILES EPA 8260C**  
**METHOD BLANK QUALITY CONTROL**

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Matrix: Soil  
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB1011S1					
Dichlorodifluoromethane	ND	0.0024	EPA 8260C	10-11-17	10-11-17	
Chloromethane	ND	0.0068	EPA 8260C	10-11-17	10-11-17	
Vinyl Chloride	ND	0.0010	EPA 8260C	10-11-17	10-11-17	
Bromomethane	ND	0.0010	EPA 8260C	10-11-17	10-11-17	
Chloroethane	ND	0.0050	EPA 8260C	10-11-17	10-11-17	
Trichlorofluoromethane	ND	0.0010	EPA 8260C	10-11-17	10-11-17	
1,1-Dichloroethene	ND	0.0010	EPA 8260C	10-11-17	10-11-17	
Acetone	ND	0.0050	EPA 8260C	10-11-17	10-11-17	
Iodomethane	ND	0.0074	EPA 8260C	10-11-17	10-11-17	
Carbon Disulfide	ND	0.0010	EPA 8260C	10-11-17	10-11-17	
Methylene Chloride	ND	0.0050	EPA 8260C	10-11-17	10-11-17	
(trans) 1,2-Dichloroethene	ND	0.0010	EPA 8260C	10-11-17	10-11-17	
Methyl t-Butyl Ether	ND	0.0010	EPA 8260C	10-11-17	10-11-17	
1,1-Dichloroethane	ND	0.0010	EPA 8260C	10-11-17	10-11-17	
Vinyl Acetate	ND	0.0050	EPA 8260C	10-11-17	10-11-17	
2,2-Dichloropropane	ND	0.0010	EPA 8260C	10-11-17	10-11-17	
(cis) 1,2-Dichloroethene	ND	0.0010	EPA 8260C	10-11-17	10-11-17	
2-Butanone	ND	0.0050	EPA 8260C	10-11-17	10-11-17	
Bromochloromethane	ND	0.0010	EPA 8260C	10-11-17	10-11-17	
Chloroform	ND	0.0010	EPA 8260C	10-11-17	10-11-17	
1,1,1-Trichloroethane	ND	0.0010	EPA 8260C	10-11-17	10-11-17	
Carbon Tetrachloride	ND	0.0010	EPA 8260C	10-11-17	10-11-17	
1,1-Dichloropropene	ND	0.0010	EPA 8260C	10-11-17	10-11-17	
Benzene	ND	0.0010	EPA 8260C	10-11-17	10-11-17	
1,2-Dichloroethane	ND	0.0010	EPA 8260C	10-11-17	10-11-17	
Trichloroethene	ND	0.0010	EPA 8260C	10-11-17	10-11-17	
1,2-Dichloropropane	ND	0.0010	EPA 8260C	10-11-17	10-11-17	
Dibromomethane	ND	0.0010	EPA 8260C	10-11-17	10-11-17	
Bromodichloromethane	ND	0.0010	EPA 8260C	10-11-17	10-11-17	
2-Chloroethyl Vinyl Ether	ND	0.0050	EPA 8260C	10-11-17	10-11-17	
(cis) 1,3-Dichloropropene	ND	0.0010	EPA 8260C	10-11-17	10-11-17	
Methyl Isobutyl Ketone	ND	0.0050	EPA 8260C	10-11-17	10-11-17	
Toluene	ND	0.0050	EPA 8260C	10-11-17	10-11-17	
(trans) 1,3-Dichloropropene	ND	0.0010	EPA 8260C	10-11-17	10-11-17	



Date of Report: October 13, 2017  
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**VOLATILES EPA 8260C**  
**METHOD BLANK QUALITY CONTROL**  
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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:		MB1011S1				
1,1,2-Trichloroethane	ND	0.0010	EPA 8260C	10-11-17	10-11-17	
Tetrachloroethene	ND	0.0010	EPA 8260C	10-11-17	10-11-17	
1,3-Dichloropropane	ND	0.0010	EPA 8260C	10-11-17	10-11-17	
2-Hexanone	ND	0.0050	EPA 8260C	10-11-17	10-11-17	
Dibromochloromethane	ND	0.0010	EPA 8260C	10-11-17	10-11-17	
1,2-Dibromoethane	ND	0.0010	EPA 8260C	10-11-17	10-11-17	
Chlorobenzene	ND	0.0010	EPA 8260C	10-11-17	10-11-17	
1,1,1,2-Tetrachloroethane	ND	0.0010	EPA 8260C	10-11-17	10-11-17	
Ethylbenzene	ND	0.0010	EPA 8260C	10-11-17	10-11-17	
m,p-Xylene	ND	0.0020	EPA 8260C	10-11-17	10-11-17	
o-Xylene	ND	0.0010	EPA 8260C	10-11-17	10-11-17	
Styrene	ND	0.0010	EPA 8260C	10-11-17	10-11-17	
Bromoform	ND	0.0050	EPA 8260C	10-11-17	10-11-17	
Isopropylbenzene	ND	0.0010	EPA 8260C	10-11-17	10-11-17	
Bromobenzene	ND	0.0010	EPA 8260C	10-11-17	10-11-17	
1,1,2,2-Tetrachloroethane	ND	0.0010	EPA 8260C	10-11-17	10-11-17	
1,2,3-Trichloropropane	ND	0.0010	EPA 8260C	10-11-17	10-11-17	
n-Propylbenzene	ND	0.0010	EPA 8260C	10-11-17	10-11-17	
2-Chlorotoluene	ND	0.0010	EPA 8260C	10-11-17	10-11-17	
4-Chlorotoluene	ND	0.0010	EPA 8260C	10-11-17	10-11-17	
1,3,5-Trimethylbenzene	ND	0.0010	EPA 8260C	10-11-17	10-11-17	
tert-Butylbenzene	ND	0.0010	EPA 8260C	10-11-17	10-11-17	
1,2,4-Trimethylbenzene	ND	0.0010	EPA 8260C	10-11-17	10-11-17	
sec-Butylbenzene	ND	0.0010	EPA 8260C	10-11-17	10-11-17	
1,3-Dichlorobenzene	ND	0.0010	EPA 8260C	10-11-17	10-11-17	
p-Isopropyltoluene	ND	0.0010	EPA 8260C	10-11-17	10-11-17	
1,4-Dichlorobenzene	ND	0.0010	EPA 8260C	10-11-17	10-11-17	
1,2-Dichlorobenzene	ND	0.0010	EPA 8260C	10-11-17	10-11-17	
n-Butylbenzene	ND	0.0010	EPA 8260C	10-11-17	10-11-17	
1,2-Dibromo-3-chloropropane	ND	0.0050	EPA 8260C	10-11-17	10-11-17	
1,2,4-Trichlorobenzene	ND	0.0010	EPA 8260C	10-11-17	10-11-17	
Hexachlorobutadiene	ND	0.0050	EPA 8260C	10-11-17	10-11-17	
Naphthalene	ND	0.0010	EPA 8260C	10-11-17	10-11-17	
1,2,3-Trichlorobenzene	ND	0.0010	EPA 8260C	10-11-17	10-11-17	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>98</i>	<i>73-134</i>				
<i>Toluene-d8</i>	<i>99</i>	<i>81-124</i>				
<i>4-Bromofluorobenzene</i>	<i>100</i>	<i>80-131</i>				



Date of Report: October 13, 2017  
 Samples Submitted: October 3, 2017  
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**VOLATILES EPA 8260C**  
**METHOD BLANK QUALITY CONTROL**

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Matrix: Soil  
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB1012S1					
Dichlorodifluoromethane	ND	0.0027	EPA 8260C	10-12-17	10-12-17	
Chloromethane	ND	0.0072	EPA 8260C	10-12-17	10-12-17	
Vinyl Chloride	ND	0.0013	EPA 8260C	10-12-17	10-12-17	
Bromomethane	ND	0.0010	EPA 8260C	10-12-17	10-12-17	
Chloroethane	ND	0.0050	EPA 8260C	10-12-17	10-12-17	
Trichlorofluoromethane	ND	0.0010	EPA 8260C	10-12-17	10-12-17	
1,1-Dichloroethene	ND	0.0010	EPA 8260C	10-12-17	10-12-17	
Acetone	ND	0.0050	EPA 8260C	10-12-17	10-12-17	
Iodomethane	ND	0.0071	EPA 8260C	10-12-17	10-12-17	
Carbon Disulfide	ND	0.0010	EPA 8260C	10-12-17	10-12-17	
Methylene Chloride	ND	0.0050	EPA 8260C	10-12-17	10-12-17	
(trans) 1,2-Dichloroethene	ND	0.0010	EPA 8260C	10-12-17	10-12-17	
Methyl t-Butyl Ether	ND	0.0010	EPA 8260C	10-12-17	10-12-17	
1,1-Dichloroethane	ND	0.0010	EPA 8260C	10-12-17	10-12-17	
Vinyl Acetate	ND	0.0050	EPA 8260C	10-12-17	10-12-17	
2,2-Dichloropropane	ND	0.0010	EPA 8260C	10-12-17	10-12-17	
(cis) 1,2-Dichloroethene	ND	0.0010	EPA 8260C	10-12-17	10-12-17	
2-Butanone	ND	0.0050	EPA 8260C	10-12-17	10-12-17	
Bromochloromethane	ND	0.0010	EPA 8260C	10-12-17	10-12-17	
Chloroform	ND	0.0010	EPA 8260C	10-12-17	10-12-17	
1,1,1-Trichloroethane	ND	0.0010	EPA 8260C	10-12-17	10-12-17	
Carbon Tetrachloride	ND	0.0010	EPA 8260C	10-12-17	10-12-17	
1,1-Dichloropropene	ND	0.0010	EPA 8260C	10-12-17	10-12-17	
Benzene	ND	0.0010	EPA 8260C	10-12-17	10-12-17	
1,2-Dichloroethane	ND	0.0010	EPA 8260C	10-12-17	10-12-17	
Trichloroethene	ND	0.0010	EPA 8260C	10-12-17	10-12-17	
1,2-Dichloropropane	ND	0.0010	EPA 8260C	10-12-17	10-12-17	
Dibromomethane	ND	0.0010	EPA 8260C	10-12-17	10-12-17	
Bromodichloromethane	ND	0.0010	EPA 8260C	10-12-17	10-12-17	
2-Chloroethyl Vinyl Ether	ND	0.0050	EPA 8260C	10-12-17	10-12-17	
(cis) 1,3-Dichloropropene	ND	0.0010	EPA 8260C	10-12-17	10-12-17	
Methyl Isobutyl Ketone	ND	0.0050	EPA 8260C	10-12-17	10-12-17	
Toluene	ND	0.0050	EPA 8260C	10-12-17	10-12-17	
(trans) 1,3-Dichloropropene	ND	0.0010	EPA 8260C	10-12-17	10-12-17	



Date of Report: October 13, 2017  
 Samples Submitted: October 3, 2017  
 Laboratory Reference: 1710-028  
 Project: 4082-039-01

**VOLATILES EPA 8260C**  
**METHOD BLANK QUALITY CONTROL**  
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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:		MB1012S1				
1,1,2-Trichloroethane	ND	0.0010	EPA 8260C	10-12-17	10-12-17	
Tetrachloroethene	ND	0.0010	EPA 8260C	10-12-17	10-12-17	
1,3-Dichloropropane	ND	0.0010	EPA 8260C	10-12-17	10-12-17	
2-Hexanone	ND	0.0050	EPA 8260C	10-12-17	10-12-17	
Dibromochloromethane	ND	0.0010	EPA 8260C	10-12-17	10-12-17	
1,2-Dibromoethane	ND	0.0010	EPA 8260C	10-12-17	10-12-17	
Chlorobenzene	ND	0.0010	EPA 8260C	10-12-17	10-12-17	
1,1,1,2-Tetrachloroethane	ND	0.0010	EPA 8260C	10-12-17	10-12-17	
Ethylbenzene	ND	0.0010	EPA 8260C	10-12-17	10-12-17	
m,p-Xylene	ND	0.0020	EPA 8260C	10-12-17	10-12-17	
o-Xylene	ND	0.0010	EPA 8260C	10-12-17	10-12-17	
Styrene	ND	0.0010	EPA 8260C	10-12-17	10-12-17	
Bromoform	ND	0.0050	EPA 8260C	10-12-17	10-12-17	
Isopropylbenzene	ND	0.0010	EPA 8260C	10-12-17	10-12-17	
Bromobenzene	ND	0.0010	EPA 8260C	10-12-17	10-12-17	
1,1,2,2-Tetrachloroethane	ND	0.0010	EPA 8260C	10-12-17	10-12-17	
1,2,3-Trichloropropane	ND	0.0010	EPA 8260C	10-12-17	10-12-17	
n-Propylbenzene	ND	0.0010	EPA 8260C	10-12-17	10-12-17	
2-Chlorotoluene	ND	0.0010	EPA 8260C	10-12-17	10-12-17	
4-Chlorotoluene	ND	0.0010	EPA 8260C	10-12-17	10-12-17	
1,3,5-Trimethylbenzene	ND	0.0010	EPA 8260C	10-12-17	10-12-17	
tert-Butylbenzene	ND	0.0010	EPA 8260C	10-12-17	10-12-17	
1,2,4-Trimethylbenzene	ND	0.0010	EPA 8260C	10-12-17	10-12-17	
sec-Butylbenzene	ND	0.0010	EPA 8260C	10-12-17	10-12-17	
1,3-Dichlorobenzene	ND	0.0010	EPA 8260C	10-12-17	10-12-17	
p-Isopropyltoluene	ND	0.0010	EPA 8260C	10-12-17	10-12-17	
1,4-Dichlorobenzene	ND	0.0010	EPA 8260C	10-12-17	10-12-17	
1,2-Dichlorobenzene	ND	0.0010	EPA 8260C	10-12-17	10-12-17	
n-Butylbenzene	ND	0.0010	EPA 8260C	10-12-17	10-12-17	
1,2-Dibromo-3-chloropropane	ND	0.0050	EPA 8260C	10-12-17	10-12-17	
1,2,4-Trichlorobenzene	ND	0.0010	EPA 8260C	10-12-17	10-12-17	
Hexachlorobutadiene	ND	0.0050	EPA 8260C	10-12-17	10-12-17	
Naphthalene	ND	0.0010	EPA 8260C	10-12-17	10-12-17	
1,2,3-Trichlorobenzene	ND	0.0010	EPA 8260C	10-12-17	10-12-17	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>107</i>	<i>73-134</i>				
<i>Toluene-d8</i>	<i>112</i>	<i>81-124</i>				
<i>4-Bromofluorobenzene</i>	<i>122</i>	<i>80-131</i>				



Date of Report: October 13, 2017  
 Samples Submitted: October 3, 2017  
 Laboratory Reference: 1710-028  
 Project: 4082-039-01

**VOLATILES EPA 8260C  
 SB/SBD QUALITY CONTROL**

Matrix: Soil  
 Units: mg/kg

Analyte	Result		Spike Level		Percent Recovery		Recovery	RPD		Flags
					Recovery	Limits	RPD	Limit		
<b>SPIKE BLANKS</b>										
Laboratory ID:	SB1011S1									
	SB	SBD	SB	SBD	SB	SBD				
1,1-Dichloroethene	<b>0.0529</b>	<b>0.0533</b>	0.0500	0.0500	106	107	66-127	1	15	
Benzene	<b>0.0585</b>	<b>0.0594</b>	0.0500	0.0500	117	119	76-122	2	15	
Trichloroethene	<b>0.0390</b>	<b>0.0393</b>	0.0500	0.0500	78	79	78-120	1	15	
Toluene	<b>0.0526</b>	<b>0.0543</b>	0.0500	0.0500	105	109	83-120	3	15	
Chlorobenzene	<b>0.0452</b>	<b>0.0461</b>	0.0500	0.0500	90	92	81-120	2	15	
<i>Surrogate:</i>										
<i>Dibromofluoromethane</i>					102	109	73-134			
<i>Toluene-d8</i>					99	110	81-124			
<i>4-Bromofluorobenzene</i>					97	104	80-131			



Date of Report: October 13, 2017  
 Samples Submitted: October 3, 2017  
 Laboratory Reference: 1710-028  
 Project: 4082-039-01

**VOLATILES EPA 8260C  
 SB/SBD QUALITY CONTROL**

Matrix: Soil  
 Units: mg/kg

Analyte	Result		Spike Level		Percent Recovery		Recovery	RPD		Flags
					Recovery	Limits	RPD	Limit		
<b>SPIKE BLANKS</b>										
Laboratory ID:	SB1012S1									
	SB	SBD	SB	SBD	SB	SBD				
1,1-Dichloroethene	<b>0.0529</b>	<b>0.0529</b>	0.0500	0.0500	106	106	66-127	0	15	
Benzene	<b>0.0604</b>	<b>0.0599</b>	0.0500	0.0500	121	120	76-122	1	15	
Trichloroethene	<b>0.0400</b>	<b>0.0395</b>	0.0500	0.0500	80	79	78-120	1	15	
Toluene	<b>0.0554</b>	<b>0.0540</b>	0.0500	0.0500	111	108	83-120	3	15	
Chlorobenzene	<b>0.0461</b>	<b>0.0453</b>	0.0500	0.0500	92	91	81-120	2	15	
<i>Surrogate:</i>										
<i>Dibromofluoromethane</i>					<i>94</i>	<i>101</i>	<i>73-134</i>			
<i>Toluene-d8</i>					<i>102</i>	<i>107</i>	<i>81-124</i>			
<i>4-Bromofluorobenzene</i>					<i>108</i>	<i>111</i>	<i>80-131</i>			



Date of Report: October 13, 2017  
Samples Submitted: October 3, 2017  
Laboratory Reference: 1710-028  
Project: 4082-039-01

**TOTAL METALS  
EPA 6010C/6020A  
METHOD BLANK QUALITY CONTROL**

Date Extracted: 10-6-17  
Date Analyzed: 10-6&10-17  
  
Matrix: Soil  
Units: mg/kg (ppm)  
  
Lab ID: MB1006SM1

Analyte	Method	Result	PQL
Arsenic	6020A	<b>ND</b>	2.5
Lead	6010C	<b>ND</b>	5.0



Date of Report: October 13, 2017  
Samples Submitted: October 3, 2017  
Laboratory Reference: 1710-028  
Project: 4082-039-01

**TOTAL METALS  
EPA 6010C/6020A  
DUPLICATE QUALITY CONTROL**

Date Extracted: 10-6-17  
Date Analyzed: 10-6&10-17

Matrix: Soil  
Units: mg/kg (ppm)

Lab ID: 10-010-01

Analyte	Sample Result	Duplicate Result	RPD	PQL	Flags
Arsenic	ND	ND	NA	2.5	
Lead	ND	ND	NA	5.0	



Date of Report: October 13, 2017  
 Samples Submitted: October 3, 2017  
 Laboratory Reference: 1710-028  
 Project: 4082-039-01

**TOTAL METALS  
 EPA 6010C/6020A  
 MS/MSD QUALITY CONTROL**

Date Extracted: 10-6-17  
 Date Analyzed: 10-6&10-17

Matrix: Soil  
 Units: mg/kg (ppm)

Lab ID: 10-010-01

Analyte	Spike Level	MS	Percent Recovery	MSD	Percent Recovery	RPD	Flags
Arsenic	100	<b>94.8</b>	95	<b>94.8</b>	95	0	
Lead	250	<b>227</b>	91	<b>228</b>	91	1	



Date of Report: October 13, 2017  
Samples Submitted: October 3, 2017  
Laboratory Reference: 1710-028  
Project: 4082-039-01

### % MOISTURE

Date Analyzed: 10-6&11-17

Client ID	Lab ID	% Moisture
FL358-MW3-0-0.5	10-028-01	6
FL358-MW3-0.5-1	10-028-02	6
FL358-MW3-4-5	10-028-03	9
FL358-MW3-7-8	10-028-04	15
FL358-MW3-11-12	10-028-05	13
FL358-MW4-0-0.5	10-028-08	10
FL358-MW4-0.5-1	10-028-09	9
FL358-MW4-6.5-7.5	10-028-11	16
FL358-MW4-8.5-9.5	10-028-12	11





### Data Qualifiers and Abbreviations

- A - Due to a high sample concentration, the amount spiked is insufficient for meaningful MS/MSD recovery data.
  - B - The analyte indicated was also found in the blank sample.
  - C - The duplicate RPD is outside control limits due to high result variability when analyte concentrations are within five times the quantitation limit.
  - E - The value reported exceeds the quantitation range and is an estimate.
  - F - Surrogate recovery data is not available due to the high concentration of coeluting target compounds.
  - H - The analyte indicated is a common laboratory solvent and may have been introduced during sample preparation, and be impacting the sample result.
  - I - Compound recovery is outside of the control limits.
  - J - The value reported was below the practical quantitation limit. The value is an estimate.
  - K - Sample duplicate RPD is outside control limits due to sample inhomogeneity. The sample was re-extracted and re-analyzed with similar results.
  - L - The RPD is outside of the control limits.
  - M - Hydrocarbons in the gasoline range are impacting the diesel range result.
  - M1 - Hydrocarbons in the gasoline range (toluene-naphthalene) are present in the sample.
  - N - Hydrocarbons in the lube oil range are impacting the diesel range result.
  - N1 - Hydrocarbons in diesel range are impacting lube oil range results.
  - O - Hydrocarbons indicative of heavier fuels are present in the sample and are impacting the gasoline result.
  - P - The RPD of the detected concentrations between the two columns is greater than 40.
  - Q - Surrogate recovery is outside of the control limits.
  - S - Surrogate recovery data is not available due to the necessary dilution of the sample.
  - T - The sample chromatogram is not similar to a typical \_\_\_\_\_.
  - U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.
  - U1 - The practical quantitation limit is elevated due to interferences present in the sample.
  - V - Matrix Spike/Matrix Spike Duplicate recoveries are outside control limits due to matrix effects.
  - W - Matrix Spike/Matrix Spike Duplicate RPD are outside control limits due to matrix effects.
  - X - Sample extract treated with a mercury cleanup procedure.
  - X1 - Sample extract treated with a Sulfuric acid/Silica gel cleanup procedure.
  - Y - The calibration verification for this analyte exceeded the 20% drift specified in method 8260C, and therefore the reported result should be considered an estimate. The overall performance of the calibration verification standard met the acceptance criteria of the method.
  - Z -
- ND - Not Detected at PQL  
 PQL - Practical Quantitation Limit  
 RPD - Relative Percent Difference





**MVA Onsite Environmental Inc.**  
 Analytical Laboratory Testing Services  
 14648 NE 95th Street • Redmond, WA 98052  
 Phone: (425) 883-3881 • www.onsite-env.com

# Chain of Custody

**Turnaround Request**  
(in working days)

(Check One)

Same Day  1 Day

2 Days  3 Days

Standard (7 Days)  
(TPH analysis 5 Days)

\_\_\_\_\_ (other)

**Laboratory Number:**

**10-028**

Company: **GEI**

Project Number: **4082-039-07**

Project Name: **Sound Transit Phase II**

Project Manager: **Marsi Beeson**

Sampled by: **CAG/PPDR**

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix
1	FL358-MW3-0-0.5	10/31/17	900	Soil
2	FL358-MW3-0.5-1		902	
3	FL358-MW3-4-5		910	
4	FL358-MW3-7-8		915	
5	FL358-MW3-11-12		926	
6	FL358-MW3-13.5-14.5		925	
7	FL358-MW3-19-20		930	
8	FL358-MW4-0-0.5		1116	
9	FL358-MW4-0.5-1		1112	
10	FL358-MW4-3-4		1120	

Turnaround Request (in working days)		
<input type="checkbox"/> Same Day	<input type="checkbox"/> 1 Day	
<input type="checkbox"/> 2 Days	<input type="checkbox"/> 3 Days	
<input checked="" type="checkbox"/> Standard (7 Days) (TPH analysis 5 Days)		
<input type="checkbox"/> _____ (other)		

**Number of Containers**

Number of Containers	Date	Time	Comments/Special Instructions
NWTPH-HCID			
NWTPH-Gx/BTEX			
NWTPH-Gx			
NWTPH-Dx ( <input type="checkbox"/> Acid / SG Clean-up)			
Volatiles 8260C			
Halogenated Volatiles 8260C			
EDB EPA 8011 (Waters Only)			
Semivolatiles 8270D/SIM (with low-level PAHs)			
PAHs 8270D/SIM (low-level)			
PCBs 8082A			
Organochlorine Pesticides 8081B			
Organophosphorus Pesticides 8270D/SIM			
Chlorinated Acid Herbicides 8151A			
Total RCRA Metals			
Total MTCA Metals			
TCLP Metals			
HEM (oil and grease) 1664A			
As, Pb			
% Moisture			

Received	Signature	Company	Date	Time	Comments/Special Instructions
Relinquished	<i>[Signature]</i>	GEI	10/31/17	1205	As - 72L 5PPM
Received	<i>[Signature]</i>	GEI	10/31/17	1205	
Relinquished	<i>[Signature]</i>	GEI	10/31/17	1303	
Received	<i>[Signature]</i>	Onsite Env	10/31/17	1303	<input checked="" type="checkbox"/> Added 10/4/17 5th
Relinquished	<i>[Signature]</i>				
Received					Data Package: Standard <input type="checkbox"/> Level III <input type="checkbox"/> Level IV <input type="checkbox"/>
Reviewed/Date					Chromatograms with final report <input type="checkbox"/> Electronic Data Deliverables (EDDs) <input type="checkbox"/>





14648 NE 95<sup>th</sup> Street, Redmond, WA 98052 • (425) 883-3881

October 18, 2017

Marsi Beeson  
GeoEngineers, Inc.  
12000 NW Naito Prkway, Suite 180  
Portland, OR 97209

Re: Analytical Data for Project 4082-039-01  
Laboratory Reference No. 1710-106

Dear Marsi:

Enclosed are the analytical results and associated quality control data for samples submitted on October 9, 2017.

The standard policy of OnSite Environmental, Inc. is to store your samples for 30 days from the date of receipt. If you require longer storage, please contact the laboratory.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning the data, or need additional information, please feel free to call me.

Sincerely,

A handwritten signature in black ink, appearing to read "DB", with a long horizontal flourish extending to the right.

David Baumeister  
Project Manager

Enclosures



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OnSite Environmental, Inc. 14648 NE 95<sup>th</sup> Street, Redmond, WA 98052 (425) 883-3881

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: October 18, 2017  
Samples Submitted: October 9, 2017  
Laboratory Reference: 1710-106  
Project: 4082-039-01

### Case Narrative

Samples were collected on October 9, 2017 and received by the laboratory on October 9, 2017. They were maintained at the laboratory at a temperature of 2°C to 6°C.

Please note that any and all soil sample results are reported on a dry-weight basis, unless otherwise noted below.

General QA/QC issues associated with the analytical data enclosed in this laboratory report will be indicated with a reference to a comment or explanation on the Data Qualifier page. More complex and involved QA/QC issues will be discussed in detail below.



Date of Report: October 18, 2017  
Samples Submitted: October 9, 2017  
Laboratory Reference: 1710-106  
Project: 4082-039-01

### ANALYTICAL REPORT FOR SAMPLES

Client ID	Laboratory ID	Matrix	Date Sampled	Date Received	Notes
ARCO-MW31	10-106-01	Water	10-9-17	10-9-17	
ARCO-MW32	10-106-01	Water	10-9-17	10-9-17	
ARCO-MW37	10-106-01	Water	10-9-17	10-9-17	



Date of Report: October 18, 2017  
 Samples Submitted: October 9, 2017  
 Laboratory Reference: 1710-106  
 Project: 4082-039-01

### NWTPH-Gx

Matrix: Water  
 Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>ARCO-MW31</b>					
Laboratory ID:	10-106-01					
Gasoline	<b>ND</b>	100	NWTPH-Gx	10-16-17	10-16-17	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Fluorobenzene</i>	89	66-114				
<b>Client ID:</b>	<b>ARCO-MW32</b>					
Laboratory ID:	10-106-02					
Gasoline	<b>ND</b>	100	NWTPH-Gx	10-16-17	10-16-17	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Fluorobenzene</i>	92	66-114				
<b>Client ID:</b>	<b>ARCO-MW37</b>					
Laboratory ID:	10-106-03					
Gasoline	<b>ND</b>	100	NWTPH-Gx	10-16-17	10-16-17	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Fluorobenzene</i>	89	66-114				



Date of Report: October 18, 2017  
 Samples Submitted: October 9, 2017  
 Laboratory Reference: 1710-106  
 Project: 4082-039-01

### NWTPH-Dx

Matrix: Water  
 Units: mg/L (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>ARCO-MW31</b>					
Laboratory ID:	10-106-01					
Diesel Range Organics	<b>ND</b>	0.26	NWTPH-Dx	10-12-17	10-12-17	
Lube Oil Range Organics	<b>ND</b>	0.41	NWTPH-Dx	10-12-17	10-12-17	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	75	50-150				
<b>Client ID:</b>	<b>ARCO-MW32</b>					
Laboratory ID:	10-106-02					
Diesel Range Organics	<b>0.35</b>	0.26	NWTPH-Dx	10-12-17	10-12-17	
Lube Oil Range Organics	<b>ND</b>	0.41	NWTPH-Dx	10-12-17	10-12-17	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	84	50-150				
<b>Client ID:</b>	<b>ARCO-MW37</b>					
Laboratory ID:	10-106-03					
Diesel Range Organics	<b>0.33</b>	0.26	NWTPH-Dx	10-12-17	10-12-17	
Lube Oil Range Organics	<b>0.46</b>	0.42	NWTPH-Dx	10-12-17	10-12-17	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	84	50-150				



Date of Report: October 18, 2017  
 Samples Submitted: October 9, 2017  
 Laboratory Reference: 1710-106  
 Project: 4082-039-01

**VOLATILES EPA 8260C**  
 page 1 of 2

Matrix: Water  
 Units: ug/L

<b>Analyte</b>	<b>Result</b>	<b>PQL</b>	<b>Method</b>	<b>Date Prepared</b>	<b>Date Analyzed</b>	<b>Flags</b>
<b>Client ID:</b>	<b>ARCO-MW31</b>					
<b>Laboratory ID:</b>	10-106-01					
Dichlorodifluoromethane	ND	0.20	EPA 8260C	10-13-17	10-13-17	
Chloromethane	ND	1.0	EPA 8260C	10-13-17	10-13-17	
Vinyl Chloride	ND	0.20	EPA 8260C	10-13-17	10-13-17	
Bromomethane	ND	0.20	EPA 8260C	10-13-17	10-13-17	
Chloroethane	ND	1.0	EPA 8260C	10-13-17	10-13-17	
Trichlorofluoromethane	ND	0.20	EPA 8260C	10-13-17	10-13-17	
1,1-Dichloroethene	ND	0.20	EPA 8260C	10-13-17	10-13-17	
Acetone	ND	5.0	EPA 8260C	10-13-17	10-13-17	
Iodomethane	ND	2.0	EPA 8260C	10-13-17	10-13-17	
Carbon Disulfide	ND	0.27	EPA 8260C	10-13-17	10-13-17	
Methylene Chloride	ND	1.0	EPA 8260C	10-13-17	10-13-17	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260C	10-13-17	10-13-17	
Methyl t-Butyl Ether	ND	0.20	EPA 8260C	10-13-17	10-13-17	
1,1-Dichloroethane	ND	0.20	EPA 8260C	10-13-17	10-13-17	
Vinyl Acetate	ND	1.3	EPA 8260C	10-13-17	10-13-17	
2,2-Dichloropropane	ND	0.20	EPA 8260C	10-13-17	10-13-17	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260C	10-13-17	10-13-17	
2-Butanone	ND	5.0	EPA 8260C	10-13-17	10-13-17	
Bromochloromethane	ND	0.20	EPA 8260C	10-13-17	10-13-17	
Chloroform	ND	0.20	EPA 8260C	10-13-17	10-13-17	
1,1,1-Trichloroethane	ND	0.20	EPA 8260C	10-13-17	10-13-17	
Carbon Tetrachloride	ND	0.20	EPA 8260C	10-13-17	10-13-17	
1,1-Dichloropropene	ND	0.20	EPA 8260C	10-13-17	10-13-17	
Benzene	ND	0.20	EPA 8260C	10-13-17	10-13-17	
1,2-Dichloroethane	ND	0.20	EPA 8260C	10-13-17	10-13-17	
Trichloroethene	ND	0.20	EPA 8260C	10-13-17	10-13-17	
1,2-Dichloropropane	ND	0.20	EPA 8260C	10-13-17	10-13-17	
Dibromomethane	ND	0.20	EPA 8260C	10-13-17	10-13-17	
Bromodichloromethane	ND	0.20	EPA 8260C	10-13-17	10-13-17	
2-Chloroethyl Vinyl Ether	ND	10	EPA 8260C	10-13-17	10-13-17	
(cis) 1,3-Dichloropropene	ND	0.20	EPA 8260C	10-13-17	10-13-17	
Methyl Isobutyl Ketone	ND	2.5	EPA 8260C	10-13-17	10-13-17	
Toluene	ND	1.0	EPA 8260C	10-13-17	10-13-17	
(trans) 1,3-Dichloropropene	ND	0.20	EPA 8260C	10-13-17	10-13-17	



Date of Report: October 18, 2017  
 Samples Submitted: October 9, 2017  
 Laboratory Reference: 1710-106  
 Project: 4082-039-01

**VOLATILES EPA 8260C**  
 page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>ARCO-MW31</b>					
<b>Laboratory ID:</b>	10-106-01					
1,1,2-Trichloroethane	ND	0.20	EPA 8260C	10-13-17	10-13-17	
Tetrachloroethene	ND	0.20	EPA 8260C	10-13-17	10-13-17	
1,3-Dichloropropane	ND	0.20	EPA 8260C	10-13-17	10-13-17	
2-Hexanone	ND	2.0	EPA 8260C	10-13-17	10-13-17	
Dibromochloromethane	ND	0.20	EPA 8260C	10-13-17	10-13-17	
1,2-Dibromoethane	ND	0.20	EPA 8260C	10-13-17	10-13-17	
Chlorobenzene	ND	0.20	EPA 8260C	10-13-17	10-13-17	
1,1,1,2-Tetrachloroethane	ND	0.20	EPA 8260C	10-13-17	10-13-17	
Ethylbenzene	ND	0.20	EPA 8260C	10-13-17	10-13-17	
m,p-Xylene	ND	0.40	EPA 8260C	10-13-17	10-13-17	
o-Xylene	ND	0.20	EPA 8260C	10-13-17	10-13-17	
Styrene	ND	0.20	EPA 8260C	10-13-17	10-13-17	
Bromoform	ND	1.0	EPA 8260C	10-13-17	10-13-17	
Isopropylbenzene	ND	0.20	EPA 8260C	10-13-17	10-13-17	
Bromobenzene	ND	0.20	EPA 8260C	10-13-17	10-13-17	
1,1,2,2-Tetrachloroethane	ND	0.20	EPA 8260C	10-13-17	10-13-17	
1,2,3-Trichloropropane	ND	0.20	EPA 8260C	10-13-17	10-13-17	
n-Propylbenzene	ND	0.20	EPA 8260C	10-13-17	10-13-17	
2-Chlorotoluene	ND	0.20	EPA 8260C	10-13-17	10-13-17	
4-Chlorotoluene	ND	0.20	EPA 8260C	10-13-17	10-13-17	
1,3,5-Trimethylbenzene	ND	0.20	EPA 8260C	10-13-17	10-13-17	
tert-Butylbenzene	ND	0.20	EPA 8260C	10-13-17	10-13-17	
1,2,4-Trimethylbenzene	ND	0.20	EPA 8260C	10-13-17	10-13-17	
sec-Butylbenzene	ND	0.20	EPA 8260C	10-13-17	10-13-17	
1,3-Dichlorobenzene	ND	0.20	EPA 8260C	10-13-17	10-13-17	
p-Isopropyltoluene	ND	0.20	EPA 8260C	10-13-17	10-13-17	
1,4-Dichlorobenzene	ND	0.20	EPA 8260C	10-13-17	10-13-17	
1,2-Dichlorobenzene	ND	0.20	EPA 8260C	10-13-17	10-13-17	
n-Butylbenzene	ND	0.20	EPA 8260C	10-13-17	10-13-17	
1,2-Dibromo-3-chloropropane	ND	1.0	EPA 8260C	10-13-17	10-13-17	
1,2,4-Trichlorobenzene	ND	0.20	EPA 8260C	10-13-17	10-13-17	
Hexachlorobutadiene	ND	0.20	EPA 8260C	10-13-17	10-13-17	
Naphthalene	ND	1.3	EPA 8260C	10-13-17	10-13-17	
1,2,3-Trichlorobenzene	ND	0.20	EPA 8260C	10-13-17	10-13-17	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>89</i>	<i>77-129</i>				
<i>Toluene-d8</i>	<i>94</i>	<i>80-127</i>				
<i>4-Bromofluorobenzene</i>	<i>101</i>	<i>78-125</i>				



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 Samples Submitted: October 9, 2017  
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 Project: 4082-039-01

**VOLATILES EPA 8260C**  
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Matrix: Water  
 Units: ug/L

<b>Analyte</b>	<b>Result</b>	<b>PQL</b>	<b>Method</b>	<b>Date Prepared</b>	<b>Date Analyzed</b>	<b>Flags</b>
<b>Client ID:</b>	<b>ARCO-MW32</b>					
<b>Laboratory ID:</b>	10-106-02					
Dichlorodifluoromethane	ND	0.20	EPA 8260C	10-13-17	10-13-17	
Chloromethane	ND	1.0	EPA 8260C	10-13-17	10-13-17	
Vinyl Chloride	ND	0.20	EPA 8260C	10-13-17	10-13-17	
Bromomethane	ND	0.20	EPA 8260C	10-13-17	10-13-17	
Chloroethane	ND	1.0	EPA 8260C	10-13-17	10-13-17	
Trichlorofluoromethane	ND	0.20	EPA 8260C	10-13-17	10-13-17	
1,1-Dichloroethene	ND	0.20	EPA 8260C	10-13-17	10-13-17	
Acetone	ND	5.0	EPA 8260C	10-13-17	10-13-17	
Iodomethane	ND	2.0	EPA 8260C	10-13-17	10-13-17	
Carbon Disulfide	ND	0.27	EPA 8260C	10-13-17	10-13-17	
Methylene Chloride	ND	1.0	EPA 8260C	10-13-17	10-13-17	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260C	10-13-17	10-13-17	
Methyl t-Butyl Ether	ND	0.20	EPA 8260C	10-13-17	10-13-17	
1,1-Dichloroethane	ND	0.20	EPA 8260C	10-13-17	10-13-17	
Vinyl Acetate	ND	1.3	EPA 8260C	10-13-17	10-13-17	
2,2-Dichloropropane	ND	0.20	EPA 8260C	10-13-17	10-13-17	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260C	10-13-17	10-13-17	
2-Butanone	ND	5.0	EPA 8260C	10-13-17	10-13-17	
Bromochloromethane	ND	0.20	EPA 8260C	10-13-17	10-13-17	
Chloroform	ND	0.20	EPA 8260C	10-13-17	10-13-17	
1,1,1-Trichloroethane	ND	0.20	EPA 8260C	10-13-17	10-13-17	
Carbon Tetrachloride	ND	0.20	EPA 8260C	10-13-17	10-13-17	
1,1-Dichloropropene	ND	0.20	EPA 8260C	10-13-17	10-13-17	
Benzene	ND	0.20	EPA 8260C	10-13-17	10-13-17	
1,2-Dichloroethane	ND	0.20	EPA 8260C	10-13-17	10-13-17	
Trichloroethene	ND	0.20	EPA 8260C	10-13-17	10-13-17	
1,2-Dichloropropane	ND	0.20	EPA 8260C	10-13-17	10-13-17	
Dibromomethane	ND	0.20	EPA 8260C	10-13-17	10-13-17	
Bromodichloromethane	ND	0.20	EPA 8260C	10-13-17	10-13-17	
2-Chloroethyl Vinyl Ether	ND	10	EPA 8260C	10-13-17	10-13-17	
(cis) 1,3-Dichloropropene	ND	0.20	EPA 8260C	10-13-17	10-13-17	
Methyl Isobutyl Ketone	ND	2.5	EPA 8260C	10-13-17	10-13-17	
Toluene	ND	1.0	EPA 8260C	10-13-17	10-13-17	
(trans) 1,3-Dichloropropene	ND	0.20	EPA 8260C	10-13-17	10-13-17	



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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>ARCO-MW32</b>					
<b>Laboratory ID:</b>	10-106-02					
1,1,2-Trichloroethane	ND	0.20	EPA 8260C	10-13-17	10-13-17	
Tetrachloroethene	ND	0.20	EPA 8260C	10-13-17	10-13-17	
1,3-Dichloropropane	ND	0.20	EPA 8260C	10-13-17	10-13-17	
2-Hexanone	ND	2.0	EPA 8260C	10-13-17	10-13-17	
Dibromochloromethane	ND	0.20	EPA 8260C	10-13-17	10-13-17	
1,2-Dibromoethane	ND	0.20	EPA 8260C	10-13-17	10-13-17	
Chlorobenzene	ND	0.20	EPA 8260C	10-13-17	10-13-17	
1,1,1,2-Tetrachloroethane	ND	0.20	EPA 8260C	10-13-17	10-13-17	
Ethylbenzene	ND	0.20	EPA 8260C	10-13-17	10-13-17	
m,p-Xylene	ND	0.40	EPA 8260C	10-13-17	10-13-17	
o-Xylene	ND	0.20	EPA 8260C	10-13-17	10-13-17	
Styrene	ND	0.20	EPA 8260C	10-13-17	10-13-17	
Bromoform	ND	1.0	EPA 8260C	10-13-17	10-13-17	
Isopropylbenzene	ND	0.20	EPA 8260C	10-13-17	10-13-17	
Bromobenzene	ND	0.20	EPA 8260C	10-13-17	10-13-17	
1,1,2,2-Tetrachloroethane	ND	0.20	EPA 8260C	10-13-17	10-13-17	
1,2,3-Trichloropropane	ND	0.20	EPA 8260C	10-13-17	10-13-17	
n-Propylbenzene	ND	0.20	EPA 8260C	10-13-17	10-13-17	
2-Chlorotoluene	ND	0.20	EPA 8260C	10-13-17	10-13-17	
4-Chlorotoluene	ND	0.20	EPA 8260C	10-13-17	10-13-17	
1,3,5-Trimethylbenzene	ND	0.20	EPA 8260C	10-13-17	10-13-17	
tert-Butylbenzene	ND	0.20	EPA 8260C	10-13-17	10-13-17	
1,2,4-Trimethylbenzene	ND	0.20	EPA 8260C	10-13-17	10-13-17	
sec-Butylbenzene	ND	0.20	EPA 8260C	10-13-17	10-13-17	
1,3-Dichlorobenzene	ND	0.20	EPA 8260C	10-13-17	10-13-17	
p-Isopropyltoluene	ND	0.20	EPA 8260C	10-13-17	10-13-17	
1,4-Dichlorobenzene	ND	0.20	EPA 8260C	10-13-17	10-13-17	
1,2-Dichlorobenzene	ND	0.20	EPA 8260C	10-13-17	10-13-17	
n-Butylbenzene	ND	0.20	EPA 8260C	10-13-17	10-13-17	
1,2-Dibromo-3-chloropropane	ND	1.0	EPA 8260C	10-13-17	10-13-17	
1,2,4-Trichlorobenzene	ND	0.20	EPA 8260C	10-13-17	10-13-17	
Hexachlorobutadiene	ND	0.20	EPA 8260C	10-13-17	10-13-17	
Naphthalene	ND	1.3	EPA 8260C	10-13-17	10-13-17	
1,2,3-Trichlorobenzene	ND	0.20	EPA 8260C	10-13-17	10-13-17	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>91</i>	<i>77-129</i>				
<i>Toluene-d8</i>	<i>95</i>	<i>80-127</i>				
<i>4-Bromofluorobenzene</i>	<i>99</i>	<i>78-125</i>				



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Matrix: Water  
 Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>ARCO-MW37</b>					
Laboratory ID:	10-106-03					
Dichlorodifluoromethane	ND	0.20	EPA 8260C	10-13-17	10-13-17	
Chloromethane	ND	1.0	EPA 8260C	10-13-17	10-13-17	
Vinyl Chloride	ND	0.20	EPA 8260C	10-13-17	10-13-17	
Bromomethane	ND	0.20	EPA 8260C	10-13-17	10-13-17	
Chloroethane	ND	1.0	EPA 8260C	10-13-17	10-13-17	
Trichlorofluoromethane	ND	0.20	EPA 8260C	10-13-17	10-13-17	
1,1-Dichloroethene	ND	0.20	EPA 8260C	10-13-17	10-13-17	
Acetone	ND	5.0	EPA 8260C	10-13-17	10-13-17	
Iodomethane	ND	2.0	EPA 8260C	10-13-17	10-13-17	
Carbon Disulfide	ND	0.27	EPA 8260C	10-13-17	10-13-17	
Methylene Chloride	ND	1.0	EPA 8260C	10-13-17	10-13-17	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260C	10-13-17	10-13-17	
Methyl t-Butyl Ether	ND	0.20	EPA 8260C	10-13-17	10-13-17	
1,1-Dichloroethane	ND	0.20	EPA 8260C	10-13-17	10-13-17	
Vinyl Acetate	ND	1.3	EPA 8260C	10-13-17	10-13-17	
2,2-Dichloropropane	ND	0.20	EPA 8260C	10-13-17	10-13-17	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260C	10-13-17	10-13-17	
2-Butanone	ND	5.0	EPA 8260C	10-13-17	10-13-17	
Bromochloromethane	ND	0.20	EPA 8260C	10-13-17	10-13-17	
Chloroform	ND	0.20	EPA 8260C	10-13-17	10-13-17	
1,1,1-Trichloroethane	ND	0.20	EPA 8260C	10-13-17	10-13-17	
Carbon Tetrachloride	ND	0.20	EPA 8260C	10-13-17	10-13-17	
1,1-Dichloropropene	ND	0.20	EPA 8260C	10-13-17	10-13-17	
Benzene	ND	0.20	EPA 8260C	10-13-17	10-13-17	
1,2-Dichloroethane	ND	0.20	EPA 8260C	10-13-17	10-13-17	
Trichloroethene	ND	0.20	EPA 8260C	10-13-17	10-13-17	
1,2-Dichloropropane	ND	0.20	EPA 8260C	10-13-17	10-13-17	
Dibromomethane	ND	0.20	EPA 8260C	10-13-17	10-13-17	
Bromodichloromethane	ND	0.20	EPA 8260C	10-13-17	10-13-17	
2-Chloroethyl Vinyl Ether	ND	10	EPA 8260C	10-13-17	10-13-17	
(cis) 1,3-Dichloropropene	ND	0.20	EPA 8260C	10-13-17	10-13-17	
Methyl Isobutyl Ketone	ND	2.5	EPA 8260C	10-13-17	10-13-17	
Toluene	ND	1.0	EPA 8260C	10-13-17	10-13-17	
(trans) 1,3-Dichloropropene	ND	0.20	EPA 8260C	10-13-17	10-13-17	



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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>ARCO-MW37</b>					
<b>Laboratory ID:</b>	10-106-03					
1,1,2-Trichloroethane	ND	0.20	EPA 8260C	10-13-17	10-13-17	
Tetrachloroethene	ND	0.20	EPA 8260C	10-13-17	10-13-17	
1,3-Dichloropropane	ND	0.20	EPA 8260C	10-13-17	10-13-17	
2-Hexanone	ND	2.0	EPA 8260C	10-13-17	10-13-17	
Dibromochloromethane	ND	0.20	EPA 8260C	10-13-17	10-13-17	
1,2-Dibromoethane	ND	0.20	EPA 8260C	10-13-17	10-13-17	
Chlorobenzene	ND	0.20	EPA 8260C	10-13-17	10-13-17	
1,1,1,2-Tetrachloroethane	ND	0.20	EPA 8260C	10-13-17	10-13-17	
Ethylbenzene	ND	0.20	EPA 8260C	10-13-17	10-13-17	
m,p-Xylene	ND	0.40	EPA 8260C	10-13-17	10-13-17	
o-Xylene	ND	0.20	EPA 8260C	10-13-17	10-13-17	
Styrene	ND	0.20	EPA 8260C	10-13-17	10-13-17	
Bromoform	ND	1.0	EPA 8260C	10-13-17	10-13-17	
Isopropylbenzene	ND	0.20	EPA 8260C	10-13-17	10-13-17	
Bromobenzene	ND	0.20	EPA 8260C	10-13-17	10-13-17	
1,1,2,2-Tetrachloroethane	ND	0.20	EPA 8260C	10-13-17	10-13-17	
1,2,3-Trichloropropane	ND	0.20	EPA 8260C	10-13-17	10-13-17	
n-Propylbenzene	ND	0.20	EPA 8260C	10-13-17	10-13-17	
2-Chlorotoluene	ND	0.20	EPA 8260C	10-13-17	10-13-17	
4-Chlorotoluene	ND	0.20	EPA 8260C	10-13-17	10-13-17	
1,3,5-Trimethylbenzene	ND	0.20	EPA 8260C	10-13-17	10-13-17	
tert-Butylbenzene	ND	0.20	EPA 8260C	10-13-17	10-13-17	
1,2,4-Trimethylbenzene	ND	0.20	EPA 8260C	10-13-17	10-13-17	
sec-Butylbenzene	ND	0.20	EPA 8260C	10-13-17	10-13-17	
1,3-Dichlorobenzene	ND	0.20	EPA 8260C	10-13-17	10-13-17	
p-Isopropyltoluene	ND	0.20	EPA 8260C	10-13-17	10-13-17	
1,4-Dichlorobenzene	ND	0.20	EPA 8260C	10-13-17	10-13-17	
1,2-Dichlorobenzene	ND	0.20	EPA 8260C	10-13-17	10-13-17	
n-Butylbenzene	ND	0.20	EPA 8260C	10-13-17	10-13-17	
1,2-Dibromo-3-chloropropane	ND	1.0	EPA 8260C	10-13-17	10-13-17	
1,2,4-Trichlorobenzene	ND	0.20	EPA 8260C	10-13-17	10-13-17	
Hexachlorobutadiene	ND	0.20	EPA 8260C	10-13-17	10-13-17	
Naphthalene	ND	1.3	EPA 8260C	10-13-17	10-13-17	
1,2,3-Trichlorobenzene	ND	0.20	EPA 8260C	10-13-17	10-13-17	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	89	77-129				
<i>Toluene-d8</i>	95	80-127				
<i>4-Bromofluorobenzene</i>	98	78-125				



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 Laboratory Reference: 1710-106  
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**TOTAL LEAD**  
**EPA 200.8**

Matrix: Water  
 Units: ug/L (ppb)

<b>Analyte</b>	<b>Result</b>	<b>PQL</b>	<b>EPA Method</b>	<b>Date Prepared</b>	<b>Date Analyzed</b>	<b>Flags</b>
Lab ID:	10-106-01					
<b>Client ID:</b>	<b>ARCO-MW31</b>					
Lead	<b>8.1</b>	1.1	200.8	10-12-17	10-12-17	
Lab ID:	10-106-02					
<b>Client ID:</b>	<b>ARCO-MW32</b>					
Lead	<b>ND</b>	1.1	200.8	10-12-17	10-12-17	
Lab ID:	10-106-03					
<b>Client ID:</b>	<b>ARCO-MW37</b>					
Lead	<b>ND</b>	1.1	200.8	10-12-17	10-12-17	



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**NWTPH-Gx  
 QUALITY CONTROL**

Matrix: Water  
 Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>METHOD BLANK</b>						
Laboratory ID:	MB1016W1					
Gasoline	<b>ND</b>	100	NWTPH-Gx	10-16-17	10-16-17	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
Fluorobenzene	88	66-114				

Analyte	Result	Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
<b>DUPLICATE</b>								
Laboratory ID:	10-106-01							
	ORIG	DUP						
Gasoline	<b>ND</b>	<b>ND</b>	NA	NA	NA	NA	NA	30
<i>Surrogate:</i>								
Fluorobenzene				89	80	66-114		



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**NWTPH-Dx  
 QUALITY CONTROL**

Matrix: Water  
 Units: mg/L (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>METHOD BLANK</b>						
Laboratory ID:	MB1012W1					
Diesel Range Organics	<b>ND</b>	0.25	NWTPH-Dx	10-12-17	10-12-17	
Lube Oil Range Organics	<b>ND</b>	0.40	NWTPH-Dx	10-12-17	10-12-17	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	89	50-150				

Analyte	Result	Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
<b>DUPLICATE</b>								
Laboratory ID:	10-107-01							
	ORIG	DUP						
Diesel Range Organics	<b>5.03</b>	<b>4.76</b>	NA	NA	NA	NA	6	NA M
Lube Oil Range Organics	<b>7.59</b>	<b>7.00</b>	NA	NA	NA	NA	8	NA
<i>Surrogate:</i>								
<i>o-Terphenyl</i>				89	94	50-150		



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**VOLATILES by EPA 8260C**  
**METHOD BLANK QUALITY CONTROL**  
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Matrix: Water  
 Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB1013W1					
Dichlorodifluoromethane	ND	0.20	EPA 8260C	10-13-17	10-13-17	
Chloromethane	ND	1.0	EPA 8260C	10-13-17	10-13-17	
Vinyl Chloride	ND	0.20	EPA 8260C	10-13-17	10-13-17	
Bromomethane	ND	0.20	EPA 8260C	10-13-17	10-13-17	
Chloroethane	ND	1.0	EPA 8260C	10-13-17	10-13-17	
Trichlorofluoromethane	ND	0.20	EPA 8260C	10-13-17	10-13-17	
1,1-Dichloroethene	ND	0.20	EPA 8260C	10-13-17	10-13-17	
Acetone	ND	5.0	EPA 8260C	10-13-17	10-13-17	
Iodomethane	ND	2.0	EPA 8260C	10-13-17	10-13-17	
Carbon Disulfide	ND	0.27	EPA 8260C	10-13-17	10-13-17	
Methylene Chloride	ND	1.0	EPA 8260C	10-13-17	10-13-17	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260C	10-13-17	10-13-17	
Methyl t-Butyl Ether	ND	0.20	EPA 8260C	10-13-17	10-13-17	
1,1-Dichloroethane	ND	0.20	EPA 8260C	10-13-17	10-13-17	
Vinyl Acetate	ND	1.3	EPA 8260C	10-13-17	10-13-17	
2,2-Dichloropropane	ND	0.20	EPA 8260C	10-13-17	10-13-17	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260C	10-13-17	10-13-17	
2-Butanone	ND	5.0	EPA 8260C	10-13-17	10-13-17	
Bromochloromethane	ND	0.20	EPA 8260C	10-13-17	10-13-17	
Chloroform	ND	0.20	EPA 8260C	10-13-17	10-13-17	
1,1,1-Trichloroethane	ND	0.20	EPA 8260C	10-13-17	10-13-17	
Carbon Tetrachloride	ND	0.20	EPA 8260C	10-13-17	10-13-17	
1,1-Dichloropropene	ND	0.20	EPA 8260C	10-13-17	10-13-17	
Benzene	ND	0.20	EPA 8260C	10-13-17	10-13-17	
1,2-Dichloroethane	ND	0.20	EPA 8260C	10-13-17	10-13-17	
Trichloroethene	ND	0.20	EPA 8260C	10-13-17	10-13-17	
1,2-Dichloropropane	ND	0.20	EPA 8260C	10-13-17	10-13-17	
Dibromomethane	ND	0.20	EPA 8260C	10-13-17	10-13-17	
Bromodichloromethane	ND	0.20	EPA 8260C	10-13-17	10-13-17	
2-Chloroethyl Vinyl Ether	ND	10	EPA 8260C	10-13-17	10-13-17	
(cis) 1,3-Dichloropropene	ND	0.20	EPA 8260C	10-13-17	10-13-17	
Methyl Isobutyl Ketone	ND	2.5	EPA 8260C	10-13-17	10-13-17	
Toluene	ND	1.0	EPA 8260C	10-13-17	10-13-17	
(trans) 1,3-Dichloropropene	ND	0.20	EPA 8260C	10-13-17	10-13-17	



Date of Report: October 18, 2017  
 Samples Submitted: October 9, 2017  
 Laboratory Reference: 1710-106  
 Project: 4082-039-01

**VOLATILES by EPA 8260C**  
**METHOD BLANK QUALITY CONTROL**  
 page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:		MB1013W1				
1,1,2-Trichloroethane	ND	0.20	EPA 8260C	10-13-17	10-13-17	
Tetrachloroethene	ND	0.20	EPA 8260C	10-13-17	10-13-17	
1,3-Dichloropropane	ND	0.20	EPA 8260C	10-13-17	10-13-17	
2-Hexanone	ND	2.0	EPA 8260C	10-13-17	10-13-17	
Dibromochloromethane	ND	0.20	EPA 8260C	10-13-17	10-13-17	
1,2-Dibromoethane	ND	0.20	EPA 8260C	10-13-17	10-13-17	
Chlorobenzene	ND	0.20	EPA 8260C	10-13-17	10-13-17	
1,1,1,2-Tetrachloroethane	ND	0.20	EPA 8260C	10-13-17	10-13-17	
Ethylbenzene	ND	0.20	EPA 8260C	10-13-17	10-13-17	
m,p-Xylene	ND	0.40	EPA 8260C	10-13-17	10-13-17	
o-Xylene	ND	0.20	EPA 8260C	10-13-17	10-13-17	
Styrene	ND	0.20	EPA 8260C	10-13-17	10-13-17	
Bromoform	ND	1.0	EPA 8260C	10-13-17	10-13-17	
Isopropylbenzene	ND	0.20	EPA 8260C	10-13-17	10-13-17	
Bromobenzene	ND	0.20	EPA 8260C	10-13-17	10-13-17	
1,1,2,2-Tetrachloroethane	ND	0.20	EPA 8260C	10-13-17	10-13-17	
1,2,3-Trichloropropane	ND	0.20	EPA 8260C	10-13-17	10-13-17	
n-Propylbenzene	ND	0.20	EPA 8260C	10-13-17	10-13-17	
2-Chlorotoluene	ND	0.20	EPA 8260C	10-13-17	10-13-17	
4-Chlorotoluene	ND	0.20	EPA 8260C	10-13-17	10-13-17	
1,3,5-Trimethylbenzene	ND	0.20	EPA 8260C	10-13-17	10-13-17	
tert-Butylbenzene	ND	0.20	EPA 8260C	10-13-17	10-13-17	
1,2,4-Trimethylbenzene	ND	0.20	EPA 8260C	10-13-17	10-13-17	
sec-Butylbenzene	ND	0.20	EPA 8260C	10-13-17	10-13-17	
1,3-Dichlorobenzene	ND	0.20	EPA 8260C	10-13-17	10-13-17	
p-Isopropyltoluene	ND	0.20	EPA 8260C	10-13-17	10-13-17	
1,4-Dichlorobenzene	ND	0.20	EPA 8260C	10-13-17	10-13-17	
1,2-Dichlorobenzene	ND	0.20	EPA 8260C	10-13-17	10-13-17	
n-Butylbenzene	ND	0.20	EPA 8260C	10-13-17	10-13-17	
1,2-Dibromo-3-chloropropane	ND	1.0	EPA 8260C	10-13-17	10-13-17	
1,2,4-Trichlorobenzene	ND	0.20	EPA 8260C	10-13-17	10-13-17	
Hexachlorobutadiene	ND	0.20	EPA 8260C	10-13-17	10-13-17	
Naphthalene	ND	1.3	EPA 8260C	10-13-17	10-13-17	
1,2,3-Trichlorobenzene	ND	0.20	EPA 8260C	10-13-17	10-13-17	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>88</i>	<i>77-129</i>				
<i>Toluene-d8</i>	<i>94</i>	<i>80-127</i>				
<i>4-Bromofluorobenzene</i>	<i>99</i>	<i>78-125</i>				



Date of Report: October 18, 2017  
 Samples Submitted: October 9, 2017  
 Laboratory Reference: 1710-106  
 Project: 4082-039-01

**VOLATILES by EPA 8260C  
 SB/SBD QUALITY CONTROL**

Matrix: Water  
 Units: ug/L

Analyte	Result		Spike Level		Percent Recovery		Recovery	RPD		Flags
					SB	SBD	Limits	RPD	Limit	
<b>SPIKE BLANKS</b>										
Laboratory ID:	SB1013W1									
	SB	SBD	SB	SBD	SB	SBD				
1,1-Dichloroethene	9.21	9.36	10.0	10.0	92	94	63-127	2	17	
Benzene	9.76	10.2	10.0	10.0	98	102	76-121	4	12	
Trichloroethene	9.02	9.05	10.0	10.0	90	91	64-120	0	15	
Toluene	9.67	9.94	10.0	10.0	97	99	82-120	3	13	
Chlorobenzene	9.75	10.1	10.0	10.0	98	101	80-120	4	14	
<i>Surrogate:</i>										
Dibromofluoromethane					85	86	77-129			
Toluene-d8					94	94	80-127			
4-Bromofluorobenzene					97	99	78-125			



Date of Report: October 18, 2017  
Samples Submitted: October 9, 2017  
Laboratory Reference: 1710-106  
Project: 4082-039-01

**TOTAL LEAD  
EPA 200.8  
METHOD BLANK QUALITY CONTROL**

Date Extracted: 10-12-17  
Date Analyzed: 10-12-17  
  
Matrix: Water  
Units: ug/L (ppb)  
  
Lab ID: MB1012WM1

Analyte	Method	Result	PQL
Lead	200.8	<b>ND</b>	1.1



Date of Report: October 18, 2017  
Samples Submitted: October 9, 2017  
Laboratory Reference: 1710-106  
Project: 4082-039-01

**TOTAL LEAD  
EPA 200.8  
DUPLICATE QUALITY CONTROL**

Date Extracted: 10-12-17

Date Analyzed: 10-12-17

Matrix: Water

Units: ug/L (ppb)

Lab ID: 10-024-02

Analyte	Sample Result	Duplicate Result	RPD	PQL	Flags
Lead	ND	ND	NA	1.1	



Date of Report: October 18, 2017  
 Samples Submitted: October 9, 2017  
 Laboratory Reference: 1710-106  
 Project: 4082-039-01

**TOTAL LEAD  
 EPA 200.8  
 MS/MSD QUALITY CONTROL**

Date Extracted: 10-12-17

Date Analyzed: 10-12-17

Matrix: Water

Units: ug/L (ppb)

Lab ID: 10-024-02

Analyte	Spike Level	MS	Percent Recovery	MSD	Percent Recovery	RPD	Flags
Lead	222	<b>213</b>	96	<b>214</b>	96	1	





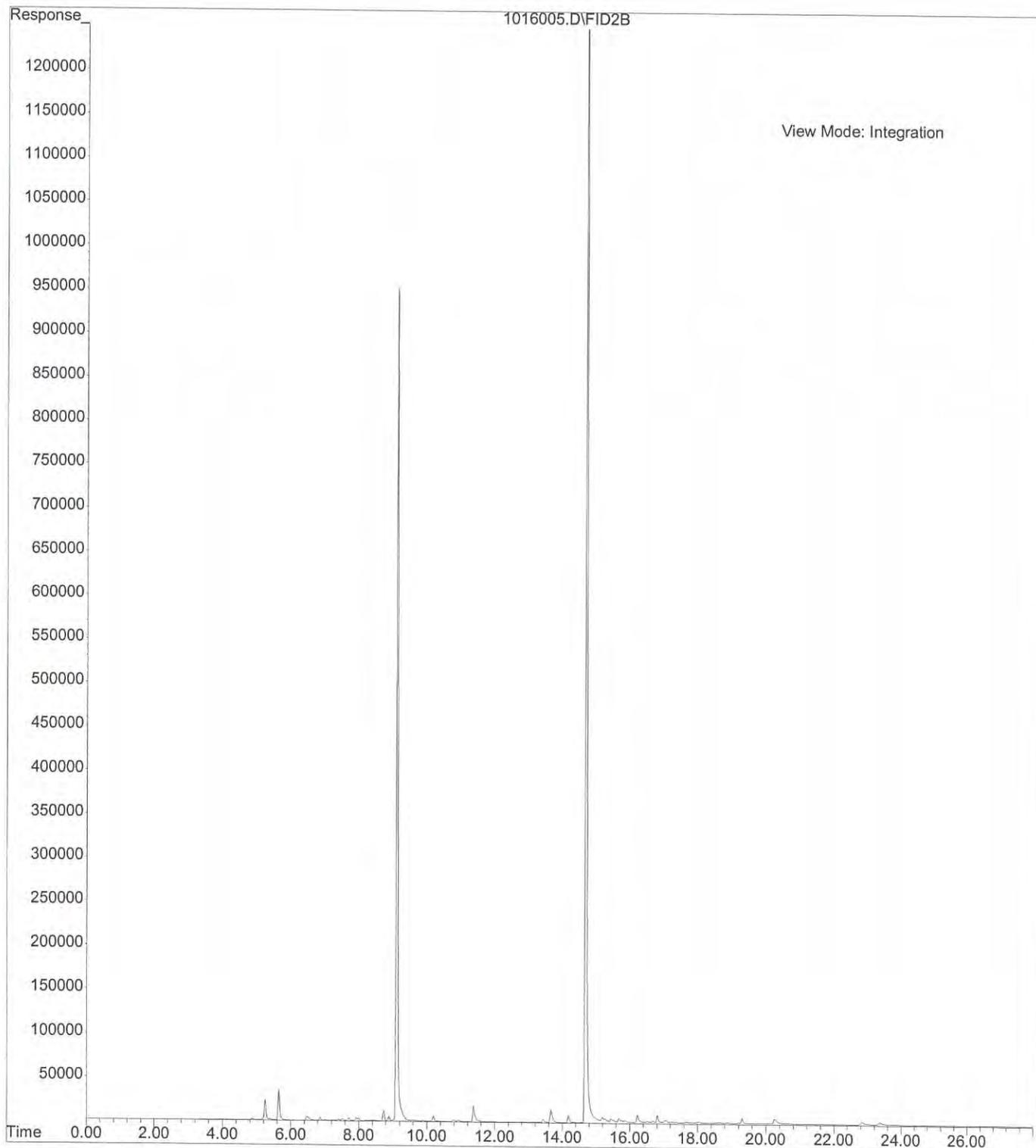
### Data Qualifiers and Abbreviations

- A - Due to a high sample concentration, the amount spiked is insufficient for meaningful MS/MSD recovery data.
  - B - The analyte indicated was also found in the blank sample.
  - C - The duplicate RPD is outside control limits due to high result variability when analyte concentrations are within five times the quantitation limit.
  - E - The value reported exceeds the quantitation range and is an estimate.
  - F - Surrogate recovery data is not available due to the high concentration of coeluting target compounds.
  - H - The analyte indicated is a common laboratory solvent and may have been introduced during sample preparation, and be impacting the sample result.
  - I - Compound recovery is outside of the control limits.
  - J - The value reported was below the practical quantitation limit. The value is an estimate.
  - K - Sample duplicate RPD is outside control limits due to sample inhomogeneity. The sample was re-extracted and re-analyzed with similar results.
  - L - The RPD is outside of the control limits.
  - M - Hydrocarbons in the gasoline range are impacting the diesel range result.
  - M1 - Hydrocarbons in the gasoline range (toluene-naphthalene) are present in the sample.
  - N - Hydrocarbons in the lube oil range are impacting the diesel range result.
  - N1 - Hydrocarbons in diesel range are impacting lube oil range results.
  - O - Hydrocarbons indicative of heavier fuels are present in the sample and are impacting the gasoline result.
  - P - The RPD of the detected concentrations between the two columns is greater than 40.
  - Q - Surrogate recovery is outside of the control limits.
  - S - Surrogate recovery data is not available due to the necessary dilution of the sample.
  - T - The sample chromatogram is not similar to a typical \_\_\_\_\_.
  - U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.
  - U1 - The practical quantitation limit is elevated due to interferences present in the sample.
  - V - Matrix Spike/Matrix Spike Duplicate recoveries are outside control limits due to matrix effects.
  - W - Matrix Spike/Matrix Spike Duplicate RPD are outside control limits due to matrix effects.
  - X - Sample extract treated with a mercury cleanup procedure.
  - X1 - Sample extract treated with a Sulfuric acid/Silica gel cleanup procedure.
  - Y - The calibration verification for this analyte exceeded the 20% drift specified in method 8260C, and therefore the reported result should be considered an estimate. The overall performance of the calibration verification standard met the acceptance criteria of the method.
  - Z -
- ND - Not Detected at PQL  
 PQL - Practical Quantitation Limit  
 RPD - Relative Percent Difference

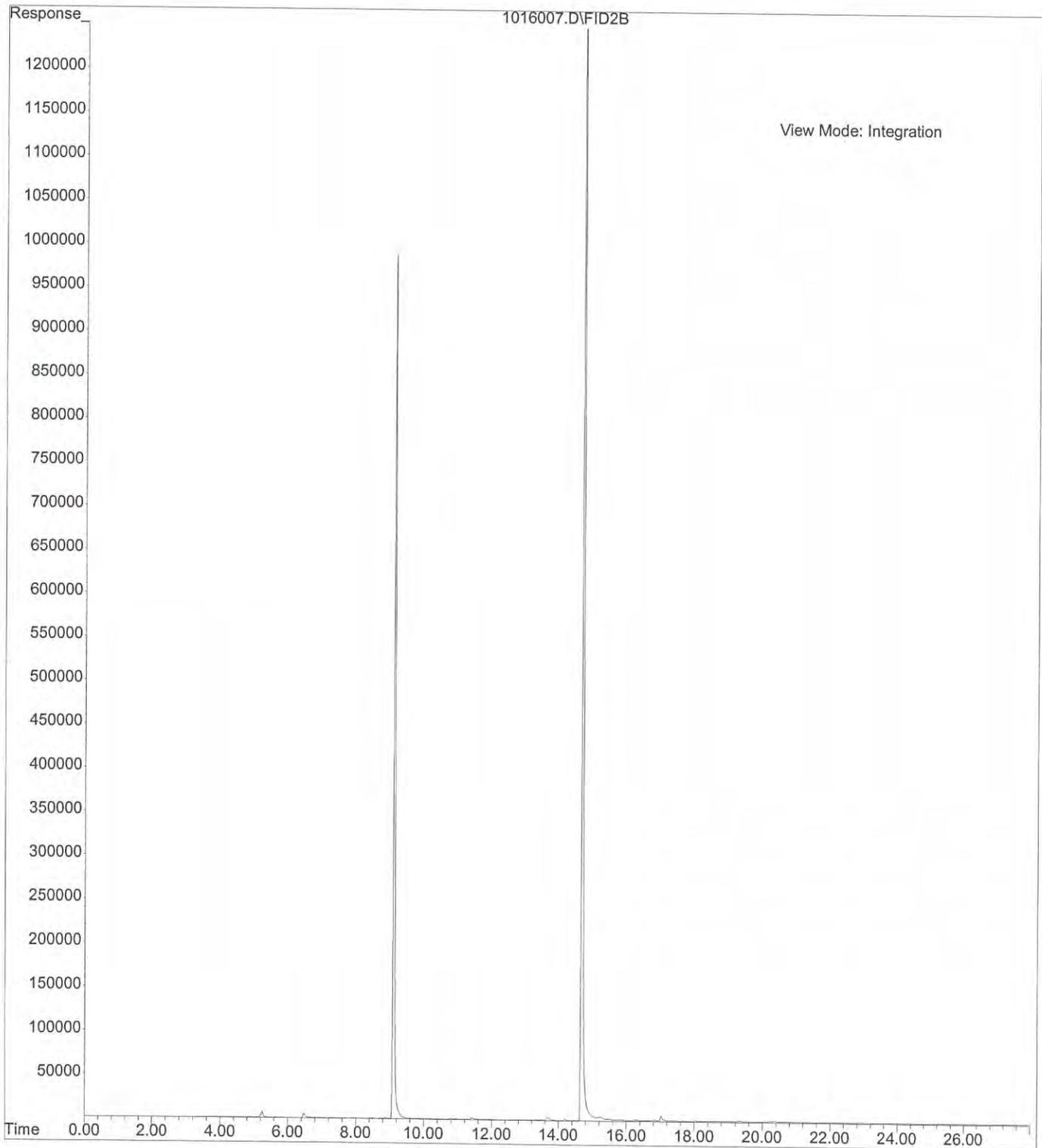




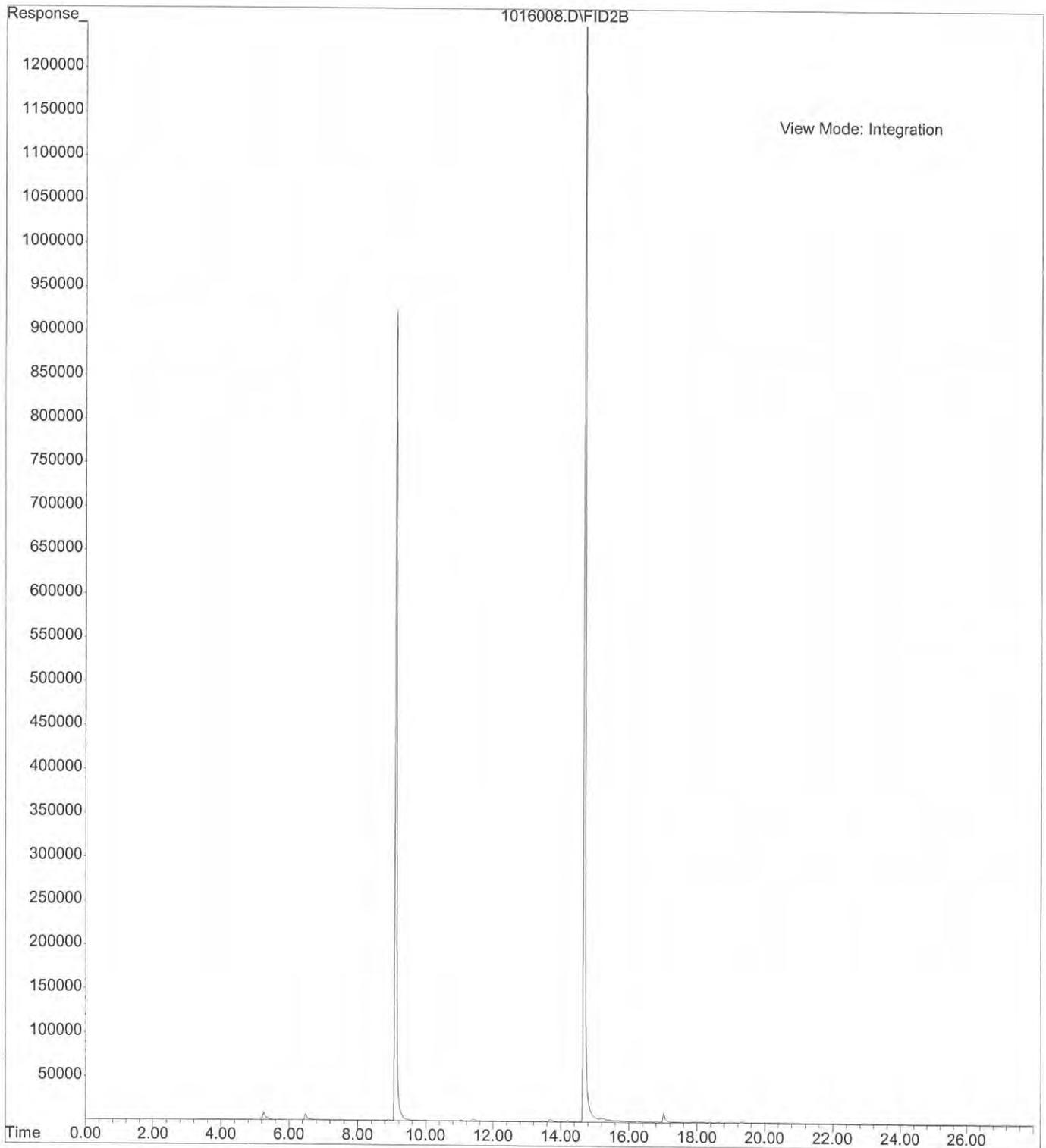
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Instrument : Hope  
Sample Name: 10-106-01f  
Misc Info :  
Vial Number: 5



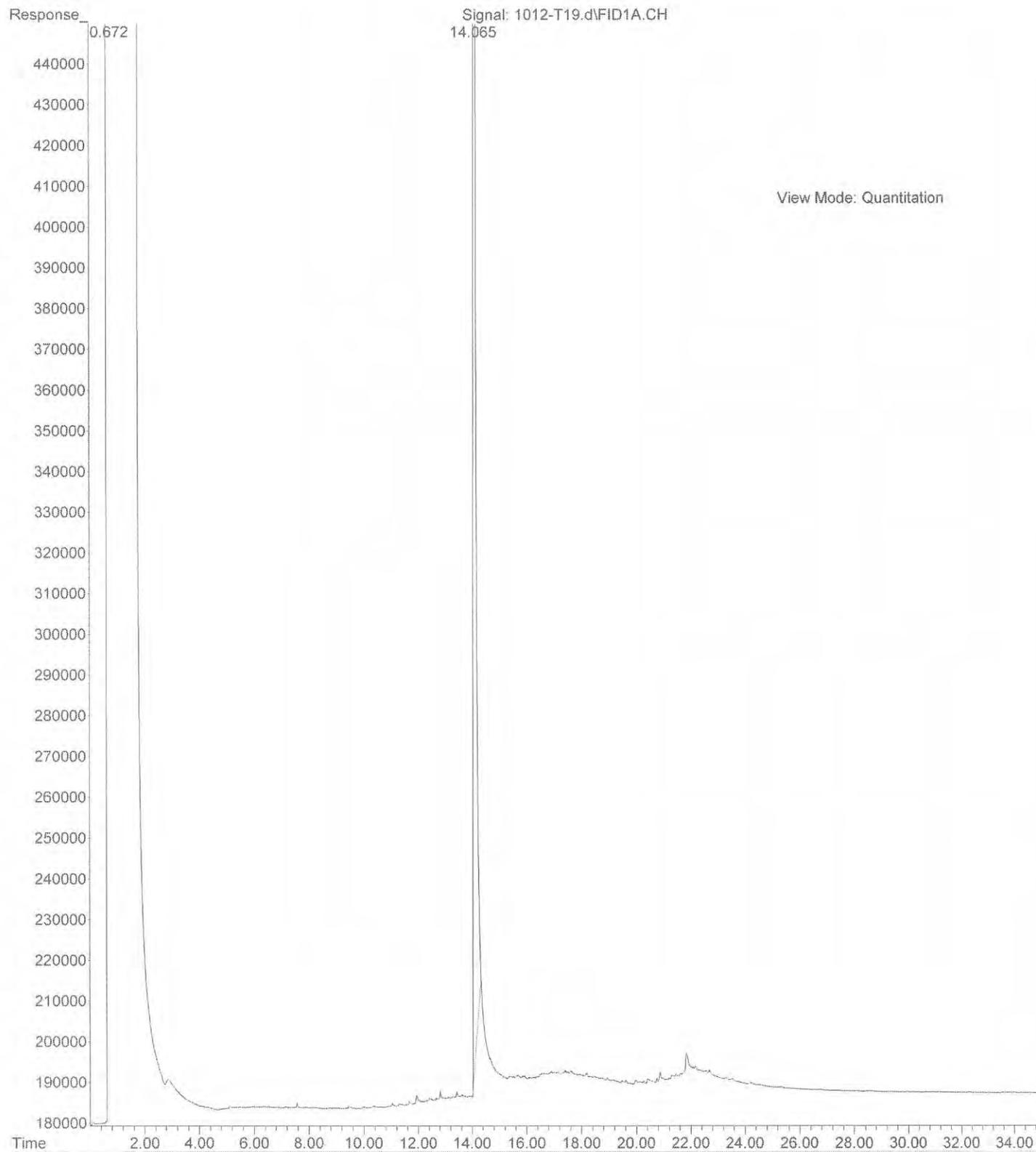
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Instrument : Hope  
Sample Name: 10-106-02f  
Misc Info :  
Vial Number: 7



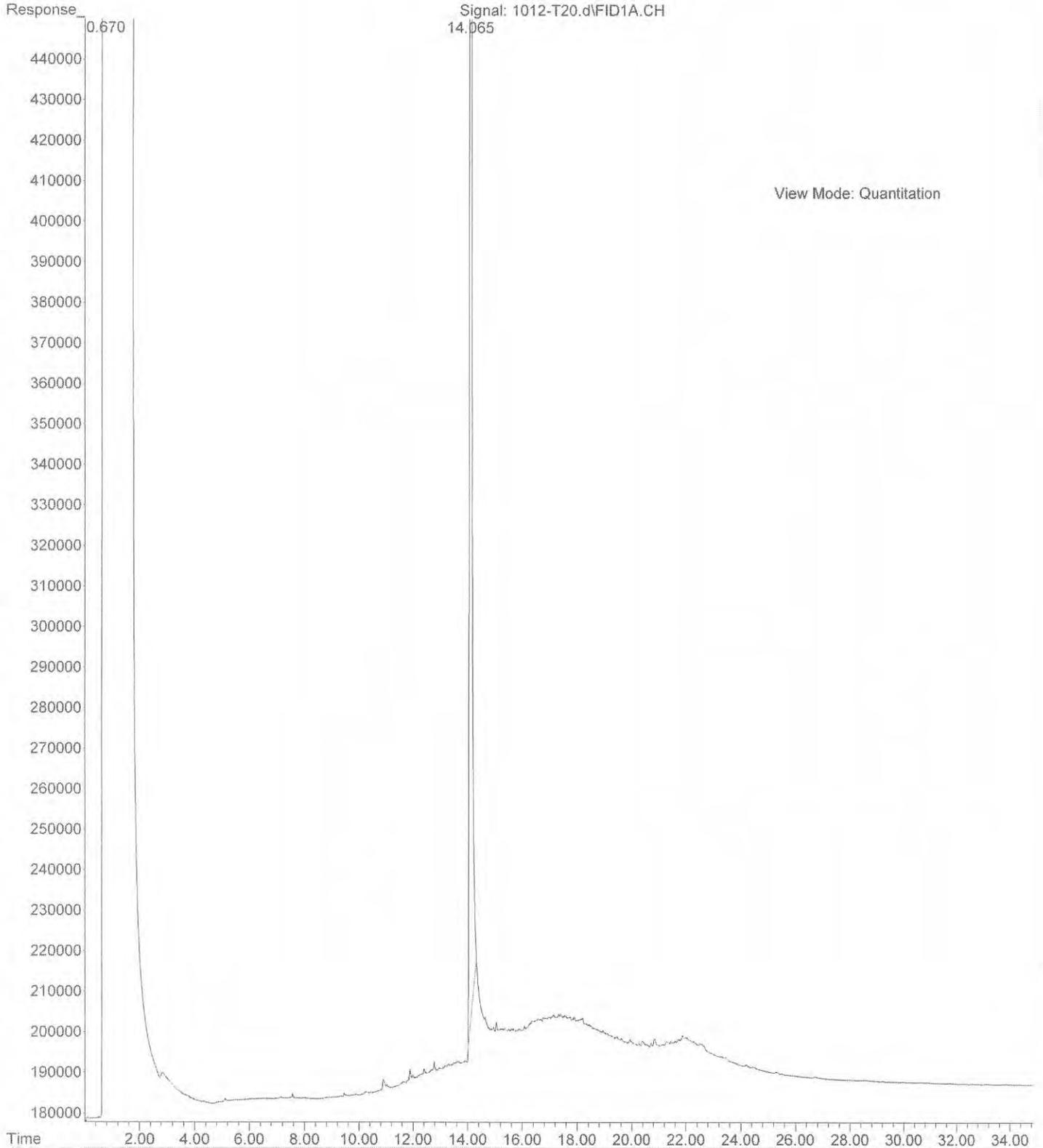
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Instrument : Hope  
Sample Name: 10-106-03f  
Misc Info :  
Vial Number: 8



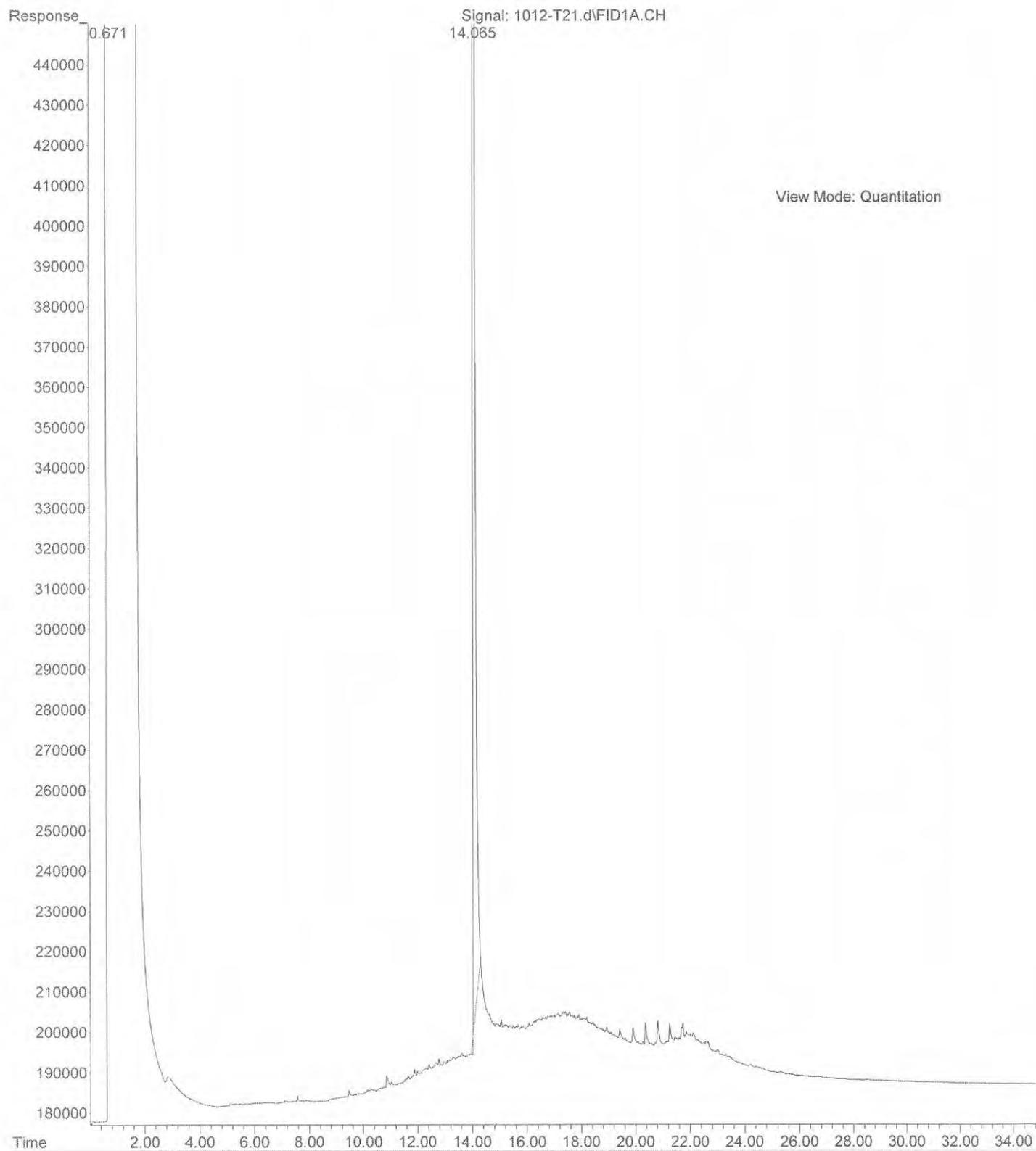
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Operator : ZT  
Acquired : 12 Oct 2017 23:23 using AcqMethod T161216F.M  
Instrument : Teri  
Sample Name: 10-106-01  
Misc Info :  
Vial Number: 19



File :C:\msdchem\1\data\T171012\1012-T20.d  
Operator : ZT  
Acquired : 13 Oct 2017 0:05 using AcqMethod T161216F.M  
Instrument : Teri  
Sample Name: 10-106-02  
Misc Info :  
Vial Number: 20



File :C:\msdchem\1\data\T171012\1012-T21.d  
Operator : ZT  
Acquired : 13 Oct 2017 0:48 using AcqMethod T161216F.M  
Instrument : Teri  
Sample Name: 10-106-03  
Misc Info :  
Vial Number: 21





14648 NE 95<sup>th</sup> Street, Redmond, WA 98052 • (425) 883-3881

October 4, 2017

Marsi Beeson  
GeoEngineers, Inc.  
12000 NW Naito Prkway, Suite 180  
Portland, OR 97209

Re: Analytical Data for Project 4082-039-01  
Laboratory Reference No. 1710-031

Dear Marsi:

Enclosed are the analytical results and associated quality control data for samples submitted on October 3, 2017.

The standard policy of OnSite Environmental, Inc. is to store your samples for 30 days from the date of receipt. If you require longer storage, please contact the laboratory.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning the data, or need additional information, please feel free to call me.

Sincerely,

A handwritten signature in black ink, appearing to read "DB", with a long horizontal stroke extending to the right.

David Baumeister  
Project Manager

Enclosures



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OnSite Environmental, Inc. 14648 NE 95<sup>th</sup> Street, Redmond, WA 98052 (425) 883-3881

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: October 4, 2017  
Samples Submitted: October 3, 2017  
Laboratory Reference: 1710-031  
Project: 4082-039-01

### Case Narrative

Samples were collected on October 3, 2017 and received by the laboratory on October 3, 2017. They were maintained at the laboratory at a temperature of 2°C to 6°C.

Please note that any and all soil sample results are reported on a dry-weight basis, unless otherwise noted below.

General QA/QC issues associated with the analytical data enclosed in this laboratory report will be indicated with a reference to a comment or explanation on the Data Qualifier page. More complex and involved QA/QC issues will be discussed in detail below.



Date of Report: October 4, 2017  
Samples Submitted: October 3, 2017  
Laboratory Reference: 1710-031  
Project: 4082-039-01

### ANALYTICAL REPORT FOR SAMPLES

Client ID	Laboratory ID	Matrix	Date Sampled	Date Received	Notes
FL358-YPaymor MW3-20171003	10-031-01	Water	10-3-17	10-3-17	



Date of Report: October 4, 2017  
 Samples Submitted: October 3, 2017  
 Laboratory Reference: 1710-031  
 Project: 4082-039-01

**VOLATILES EPA 8260C**  
 page 1 of 2

Matrix: Water  
 Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>FL358-YPaymor MW3-20171003</b>					
Laboratory ID:	10-031-01					
Dichlorodifluoromethane	ND	0.20	EPA 8260C	10-3-17	10-3-17	
Chloromethane	ND	1.0	EPA 8260C	10-3-17	10-3-17	
Vinyl Chloride	ND	0.20	EPA 8260C	10-3-17	10-3-17	
Bromomethane	ND	0.20	EPA 8260C	10-3-17	10-3-17	
Chloroethane	ND	1.0	EPA 8260C	10-3-17	10-3-17	
Trichlorofluoromethane	ND	0.20	EPA 8260C	10-3-17	10-3-17	
1,1-Dichloroethene	ND	0.20	EPA 8260C	10-3-17	10-3-17	
Acetone	ND	5.0	EPA 8260C	10-3-17	10-3-17	
Iodomethane	ND	1.5	EPA 8260C	10-3-17	10-3-17	
Carbon Disulfide	ND	0.20	EPA 8260C	10-3-17	10-3-17	
Methylene Chloride	ND	1.0	EPA 8260C	10-3-17	10-3-17	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260C	10-3-17	10-3-17	
Methyl t-Butyl Ether	ND	0.20	EPA 8260C	10-3-17	10-3-17	
1,1-Dichloroethane	ND	0.20	EPA 8260C	10-3-17	10-3-17	
Vinyl Acetate	ND	1.3	EPA 8260C	10-3-17	10-3-17	
2,2-Dichloropropane	ND	0.20	EPA 8260C	10-3-17	10-3-17	
(cis) 1,2-Dichloroethene	0.20	0.20	EPA 8260C	10-3-17	10-3-17	
2-Butanone	ND	5.0	EPA 8260C	10-3-17	10-3-17	
Bromochloromethane	ND	0.20	EPA 8260C	10-3-17	10-3-17	
Chloroform	ND	0.20	EPA 8260C	10-3-17	10-3-17	
1,1,1-Trichloroethane	ND	0.20	EPA 8260C	10-3-17	10-3-17	
Carbon Tetrachloride	ND	0.20	EPA 8260C	10-3-17	10-3-17	
1,1-Dichloropropene	ND	0.20	EPA 8260C	10-3-17	10-3-17	
Benzene	ND	0.20	EPA 8260C	10-3-17	10-3-17	
1,2-Dichloroethane	ND	0.20	EPA 8260C	10-3-17	10-3-17	
Trichloroethene	ND	0.20	EPA 8260C	10-3-17	10-3-17	
1,2-Dichloropropane	ND	0.20	EPA 8260C	10-3-17	10-3-17	
Dibromomethane	ND	0.20	EPA 8260C	10-3-17	10-3-17	
Bromodichloromethane	ND	0.20	EPA 8260C	10-3-17	10-3-17	
2-Chloroethyl Vinyl Ether	ND	3.7	EPA 8260C	10-3-17	10-3-17	
(cis) 1,3-Dichloropropene	ND	0.20	EPA 8260C	10-3-17	10-3-17	
Methyl Isobutyl Ketone	ND	2.6	EPA 8260C	10-3-17	10-3-17	
Toluene	ND	1.0	EPA 8260C	10-3-17	10-3-17	
(trans) 1,3-Dichloropropene	ND	0.20	EPA 8260C	10-3-17	10-3-17	



Date of Report: October 4, 2017  
 Samples Submitted: October 3, 2017  
 Laboratory Reference: 1710-031  
 Project: 4082-039-01

**VOLATILES EPA 8260C**  
 page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>FL358-YPaymor MW3-20171003</b>					
Laboratory ID:	10-031-01					
1,1,2-Trichloroethane	ND	0.20	EPA 8260C	10-3-17	10-3-17	
Tetrachloroethene	ND	0.20	EPA 8260C	10-3-17	10-3-17	
1,3-Dichloropropane	ND	0.20	EPA 8260C	10-3-17	10-3-17	
2-Hexanone	ND	2.6	EPA 8260C	10-3-17	10-3-17	
Dibromochloromethane	ND	0.20	EPA 8260C	10-3-17	10-3-17	
1,2-Dibromoethane	ND	0.20	EPA 8260C	10-3-17	10-3-17	
Chlorobenzene	ND	0.20	EPA 8260C	10-3-17	10-3-17	
1,1,1,2-Tetrachloroethane	ND	0.20	EPA 8260C	10-3-17	10-3-17	
Ethylbenzene	ND	0.20	EPA 8260C	10-3-17	10-3-17	
m,p-Xylene	ND	0.40	EPA 8260C	10-3-17	10-3-17	
o-Xylene	ND	0.20	EPA 8260C	10-3-17	10-3-17	
Styrene	ND	0.20	EPA 8260C	10-3-17	10-3-17	
Bromoform	ND	1.0	EPA 8260C	10-3-17	10-3-17	
Isopropylbenzene	ND	0.20	EPA 8260C	10-3-17	10-3-17	
Bromobenzene	ND	0.20	EPA 8260C	10-3-17	10-3-17	
1,1,2,2-Tetrachloroethane	ND	0.26	EPA 8260C	10-3-17	10-3-17	
1,2,3-Trichloropropane	ND	0.20	EPA 8260C	10-3-17	10-3-17	
n-Propylbenzene	ND	0.20	EPA 8260C	10-3-17	10-3-17	
2-Chlorotoluene	ND	0.20	EPA 8260C	10-3-17	10-3-17	
4-Chlorotoluene	ND	0.20	EPA 8260C	10-3-17	10-3-17	
1,3,5-Trimethylbenzene	ND	0.20	EPA 8260C	10-3-17	10-3-17	
tert-Butylbenzene	ND	0.20	EPA 8260C	10-3-17	10-3-17	
1,2,4-Trimethylbenzene	ND	0.20	EPA 8260C	10-3-17	10-3-17	
sec-Butylbenzene	ND	0.20	EPA 8260C	10-3-17	10-3-17	
1,3-Dichlorobenzene	ND	0.20	EPA 8260C	10-3-17	10-3-17	
p-Isopropyltoluene	ND	0.20	EPA 8260C	10-3-17	10-3-17	
1,4-Dichlorobenzene	ND	0.20	EPA 8260C	10-3-17	10-3-17	
1,2-Dichlorobenzene	ND	0.20	EPA 8260C	10-3-17	10-3-17	
n-Butylbenzene	ND	0.20	EPA 8260C	10-3-17	10-3-17	
1,2-Dibromo-3-chloropropane	ND	1.3	EPA 8260C	10-3-17	10-3-17	
1,2,4-Trichlorobenzene	ND	0.20	EPA 8260C	10-3-17	10-3-17	
Hexachlorobutadiene	ND	0.20	EPA 8260C	10-3-17	10-3-17	
Naphthalene	ND	1.4	EPA 8260C	10-3-17	10-3-17	
1,2,3-Trichlorobenzene	ND	0.20	EPA 8260C	10-3-17	10-3-17	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>98</i>	<i>77-129</i>				
<i>Toluene-d8</i>	<i>95</i>	<i>80-127</i>				
<i>4-Bromofluorobenzene</i>	<i>100</i>	<i>78-125</i>				



Date of Report: October 4, 2017  
 Samples Submitted: October 3, 2017  
 Laboratory Reference: 1710-031  
 Project: 4082-039-01

**VOLATILES by EPA 8260C**  
**METHOD BLANK QUALITY CONTROL**  
 page 1 of 2

Matrix: Water  
 Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB1003W1					
Dichlorodifluoromethane	ND	0.20	EPA 8260C	10-3-17	10-3-17	
Chloromethane	ND	1.0	EPA 8260C	10-3-17	10-3-17	
Vinyl Chloride	ND	0.20	EPA 8260C	10-3-17	10-3-17	
Bromomethane	ND	0.20	EPA 8260C	10-3-17	10-3-17	
Chloroethane	ND	1.0	EPA 8260C	10-3-17	10-3-17	
Trichlorofluoromethane	ND	0.20	EPA 8260C	10-3-17	10-3-17	
1,1-Dichloroethene	ND	0.20	EPA 8260C	10-3-17	10-3-17	
Acetone	ND	5.0	EPA 8260C	10-3-17	10-3-17	
Iodomethane	ND	1.5	EPA 8260C	10-3-17	10-3-17	
Carbon Disulfide	ND	0.20	EPA 8260C	10-3-17	10-3-17	
Methylene Chloride	ND	1.0	EPA 8260C	10-3-17	10-3-17	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260C	10-3-17	10-3-17	
Methyl t-Butyl Ether	ND	0.20	EPA 8260C	10-3-17	10-3-17	
1,1-Dichloroethane	ND	0.20	EPA 8260C	10-3-17	10-3-17	
Vinyl Acetate	ND	1.3	EPA 8260C	10-3-17	10-3-17	
2,2-Dichloropropane	ND	0.20	EPA 8260C	10-3-17	10-3-17	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260C	10-3-17	10-3-17	
2-Butanone	ND	5.0	EPA 8260C	10-3-17	10-3-17	
Bromochloromethane	ND	0.20	EPA 8260C	10-3-17	10-3-17	
Chloroform	ND	0.20	EPA 8260C	10-3-17	10-3-17	
1,1,1-Trichloroethane	ND	0.20	EPA 8260C	10-3-17	10-3-17	
Carbon Tetrachloride	ND	0.20	EPA 8260C	10-3-17	10-3-17	
1,1-Dichloropropene	ND	0.20	EPA 8260C	10-3-17	10-3-17	
Benzene	ND	0.20	EPA 8260C	10-3-17	10-3-17	
1,2-Dichloroethane	ND	0.20	EPA 8260C	10-3-17	10-3-17	
Trichloroethene	ND	0.20	EPA 8260C	10-3-17	10-3-17	
1,2-Dichloropropane	ND	0.20	EPA 8260C	10-3-17	10-3-17	
Dibromomethane	ND	0.20	EPA 8260C	10-3-17	10-3-17	
Bromodichloromethane	ND	0.20	EPA 8260C	10-3-17	10-3-17	
2-Chloroethyl Vinyl Ether	ND	3.7	EPA 8260C	10-3-17	10-3-17	
(cis) 1,3-Dichloropropene	ND	0.20	EPA 8260C	10-3-17	10-3-17	
Methyl Isobutyl Ketone	ND	2.6	EPA 8260C	10-3-17	10-3-17	
Toluene	ND	1.0	EPA 8260C	10-3-17	10-3-17	
(trans) 1,3-Dichloropropene	ND	0.20	EPA 8260C	10-3-17	10-3-17	



Date of Report: October 4, 2017  
 Samples Submitted: October 3, 2017  
 Laboratory Reference: 1710-031  
 Project: 4082-039-01

**VOLATILES by EPA 8260C**  
**METHOD BLANK QUALITY CONTROL**  
 page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:		MB1003W1				
1,1,2-Trichloroethane	ND	0.20	EPA 8260C	10-3-17	10-3-17	
Tetrachloroethene	ND	0.20	EPA 8260C	10-3-17	10-3-17	
1,3-Dichloropropane	ND	0.20	EPA 8260C	10-3-17	10-3-17	
2-Hexanone	ND	2.6	EPA 8260C	10-3-17	10-3-17	
Dibromochloromethane	ND	0.20	EPA 8260C	10-3-17	10-3-17	
1,2-Dibromoethane	ND	0.20	EPA 8260C	10-3-17	10-3-17	
Chlorobenzene	ND	0.20	EPA 8260C	10-3-17	10-3-17	
1,1,1,2-Tetrachloroethane	ND	0.20	EPA 8260C	10-3-17	10-3-17	
Ethylbenzene	ND	0.20	EPA 8260C	10-3-17	10-3-17	
m,p-Xylene	ND	0.40	EPA 8260C	10-3-17	10-3-17	
o-Xylene	ND	0.20	EPA 8260C	10-3-17	10-3-17	
Styrene	ND	0.20	EPA 8260C	10-3-17	10-3-17	
Bromoform	ND	1.0	EPA 8260C	10-3-17	10-3-17	
Isopropylbenzene	ND	0.20	EPA 8260C	10-3-17	10-3-17	
Bromobenzene	ND	0.20	EPA 8260C	10-3-17	10-3-17	
1,1,2,2-Tetrachloroethane	ND	0.26	EPA 8260C	10-3-17	10-3-17	
1,2,3-Trichloropropane	ND	0.20	EPA 8260C	10-3-17	10-3-17	
n-Propylbenzene	ND	0.20	EPA 8260C	10-3-17	10-3-17	
2-Chlorotoluene	ND	0.20	EPA 8260C	10-3-17	10-3-17	
4-Chlorotoluene	ND	0.20	EPA 8260C	10-3-17	10-3-17	
1,3,5-Trimethylbenzene	ND	0.20	EPA 8260C	10-3-17	10-3-17	
tert-Butylbenzene	ND	0.20	EPA 8260C	10-3-17	10-3-17	
1,2,4-Trimethylbenzene	ND	0.20	EPA 8260C	10-3-17	10-3-17	
sec-Butylbenzene	ND	0.20	EPA 8260C	10-3-17	10-3-17	
1,3-Dichlorobenzene	ND	0.20	EPA 8260C	10-3-17	10-3-17	
p-Isopropyltoluene	ND	0.20	EPA 8260C	10-3-17	10-3-17	
1,4-Dichlorobenzene	ND	0.20	EPA 8260C	10-3-17	10-3-17	
1,2-Dichlorobenzene	ND	0.20	EPA 8260C	10-3-17	10-3-17	
n-Butylbenzene	ND	0.20	EPA 8260C	10-3-17	10-3-17	
1,2-Dibromo-3-chloropropane	ND	1.3	EPA 8260C	10-3-17	10-3-17	
1,2,4-Trichlorobenzene	ND	0.20	EPA 8260C	10-3-17	10-3-17	
Hexachlorobutadiene	ND	0.20	EPA 8260C	10-3-17	10-3-17	
Naphthalene	ND	1.4	EPA 8260C	10-3-17	10-3-17	
1,2,3-Trichlorobenzene	ND	0.20	EPA 8260C	10-3-17	10-3-17	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>91</i>	<i>77-129</i>				
<i>Toluene-d8</i>	<i>95</i>	<i>80-127</i>				
<i>4-Bromofluorobenzene</i>	<i>98</i>	<i>78-125</i>				



Date of Report: October 4, 2017  
 Samples Submitted: October 3, 2017  
 Laboratory Reference: 1710-031  
 Project: 4082-039-01

**VOLATILES by EPA 8260C  
 SB/SBD QUALITY CONTROL**

Matrix: Water  
 Units: ug/L

Analyte	Result		Spike Level		Percent Recovery		Recovery	RPD		Flags
					SB	SBD	Limits	RPD	Limit	
<b>SPIKE BLANKS</b>										
Laboratory ID:	SB1003W1									
	SB	SBD	SB	SBD	SB	SBD				
1,1-Dichloroethene	8.79	8.74	10.0	10.0	88	87	63-127	1	17	
Benzene	9.60	9.85	10.0	10.0	96	99	76-121	3	12	
Trichloroethene	8.99	8.75	10.0	10.0	90	88	64-120	3	15	
Toluene	9.67	9.66	10.0	10.0	97	97	82-120	0	13	
Chlorobenzene	9.61	9.72	10.0	10.0	96	97	80-120	1	14	
<i>Surrogate:</i>										
Dibromofluoromethane					90	91	77-129			
Toluene-d8					96	95	80-127			
4-Bromofluorobenzene					95	98	78-125			





### Data Qualifiers and Abbreviations

- A - Due to a high sample concentration, the amount spiked is insufficient for meaningful MS/MSD recovery data.
  - B - The analyte indicated was also found in the blank sample.
  - C - The duplicate RPD is outside control limits due to high result variability when analyte concentrations are within five times the quantitation limit.
  - E - The value reported exceeds the quantitation range and is an estimate.
  - F - Surrogate recovery data is not available due to the high concentration of coeluting target compounds.
  - H - The analyte indicated is a common laboratory solvent and may have been introduced during sample preparation, and be impacting the sample result.
  - I - Compound recovery is outside of the control limits.
  - J - The value reported was below the practical quantitation limit. The value is an estimate.
  - K - Sample duplicate RPD is outside control limits due to sample inhomogeneity. The sample was re-extracted and re-analyzed with similar results.
  - L - The RPD is outside of the control limits.
  - M - Hydrocarbons in the gasoline range are impacting the diesel range result.
  - M1 - Hydrocarbons in the gasoline range (toluene-naphthalene) are present in the sample.
  - N - Hydrocarbons in the lube oil range are impacting the diesel range result.
  - N1 - Hydrocarbons in diesel range are impacting lube oil range results.
  - O - Hydrocarbons indicative of heavier fuels are present in the sample and are impacting the gasoline result.
  - P - The RPD of the detected concentrations between the two columns is greater than 40.
  - Q - Surrogate recovery is outside of the control limits.
  - S - Surrogate recovery data is not available due to the necessary dilution of the sample.
  - T - The sample chromatogram is not similar to a typical \_\_\_\_\_.
  - U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.
  - U1 - The practical quantitation limit is elevated due to interferences present in the sample.
  - V - Matrix Spike/Matrix Spike Duplicate recoveries are outside control limits due to matrix effects.
  - W - Matrix Spike/Matrix Spike Duplicate RPD are outside control limits due to matrix effects.
  - X - Sample extract treated with a mercury cleanup procedure.
  - X1 - Sample extract treated with a Sulfuric acid/Silica gel cleanup procedure.
  - Y - The calibration verification for this analyte exceeded the 20% drift specified in method 8260C, and therefore the reported result should be considered an estimate. The overall performance of the calibration verification standard met the acceptance criteria of the method.
  - Z -
- ND - Not Detected at PQL  
 PQL - Practical Quantitation Limit  
 RPD - Relative Percent Difference





**APPENDIX C**  
**ECOLOGY FILE, SURVEY AND TITLE REPORT**

# ALTA COMMITMENT FOR TITLE INSURANCE

Commitment Number:

Issued By agent:



**CHICAGO TITLE**  
COMPANY OF WASHINGTON

**0075348-06 [ROWS  
FL358, FL361 & FL363]  
Amendment SECOND  
COMMITMENT**

CHICAGO TITLE INSURANCE COMPANY, a Nebraska corporation ("Company"), for a valuable consideration, commits to issue its policy or policies of title insurance, as identified in Schedule A, in favor of the Proposed Insured named in Schedule A, as owner or mortgagee of the estate or interest in the land described or referred to in Schedule A, upon payment of the premiums and charges and compliance with the Requirements; all subject to the provisions of Schedules A and B and to the Conditions of this Commitment.

This Commitment shall be effective only when the identity of the Proposed Insured and the amount of the policy or policies committed for have been inserted in Schedule A by the Company.

All liability and obligation under this Commitment shall cease and terminate six (6) months after the Effective Date or when the policy or policies committed for shall issue, whichever first occurs, provided that the failure to issue the policy or policies is not the fault of the Company.

The Company will provide a sample of the policy form upon request.

This Commitment shall not be valid or binding until countersigned by a validating officer or authorized signatory.

IN WITNESS WHEREOF, CHICAGO TITLE INSURANCE COMPANY has caused its corporate name and seal to be affixed by its duly authorized officers on the date shown in Schedule A.

**Chicago Title Insurance Company**

By:

\_\_\_\_\_  
President

Attest:

\_\_\_\_\_  
Secretary

Countersigned By:

\_\_\_\_\_  
Authorized Officer or Agent



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ALTA Commitment (06/17/2006)



CHICAGO TITLE COMPANY OF WASHINGTON

ISSUING OFFICE:	FOR SETTLEMENT INQUIRIES, CONTACT:
Title Officer: Commercial / Unit 6 Chicago Title Company of Washington 701 5th Avenue, Suite 2700 Seattle, WA 98104 Main Phone: (206)628-5610 Email: CTISeaTitleUnit6@ctt.com	

**SCHEDULE A**

**ORDER NO. 0075348-06**

1. Effective Date: September 15, 2016 at 08:00 AM
2. Policy or (Policies) to be issued:
  - a. To Be Determined

Proposed Insured:	Central Puget Sound Regional Transit Authority, a regional transit authority
Policy Amount:	\$0.00
Premium:	\$ 0.00
Tax:	\$ 0.00
Rate:	Standard
Total:	\$ 0.00
3. The estate or interest in the land described or referred to in this Commitment is:  
Fee Simple
4. Title to the estate or interest in the land is at the Effective Date vested in:  
Winson at Federal Way LLC, a Washington Limited Liability Company
5. The land referred to in this Commitment is described as follows:  
SEE EXHIBIT "A" ATTACHED HERETO AND MADE A PART HEREOF

**END OF SCHEDULE A**

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**EXHIBIT "A"**  
Legal Description

Lots 1 and 6 and Tract A of Amendment to Evergreen Plaza Binding Site Plan/PUD, recorded September 9, 2003 under recording number 20030909000708, in Volume 216 of Plats, Page(s) 36 to 38, in King County, Washington;

Except that portion thereof conveyed to the City of Federal Way by statutory warranty deed recorded under recording no. 20050524000385.

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**SCHEDULE B**

Schedule B of the policy or policies to be issued will contain exceptions to the following matters unless the same are disposed of to the satisfaction of the Company:

**GENERAL EXCEPTIONS**

- A. Rights or claims of parties in possession, or claiming possession, not shown by the Public Records.
- B. Any encroachment, encumbrance, violation, variation, or adverse circumstance affecting the Title that would be disclosed by an accurate and complete land survey of the Land.
- C. Easements, prescriptive rights, rights-of-way, liens or encumbrances, or claims thereof, not shown by the Public Records.
- D. Any lien, or right to a lien, for contributions to employee benefit funds, or for state workers' compensation, or for services, labor, or material heretofore or hereafter furnished, all as imposed by law, and not shown by the Public Records.
- E. Taxes or special assessments which are not yet payable or which are not shown as existing liens by the Public Records.
- F. Any lien for service, installation, connection, maintenance, tap, capacity, or construction or similar charges for sewer, water, electricity, natural gas or other utilities, or for garbage collection and disposal not shown by the Public Records.
- G. Unpatented mining claims, and all rights relating thereto.
- H. Reservations and exceptions in United States Patents or in Acts authorizing the issuance thereof.
- I. Indian tribal codes or regulations, Indian treaty or aboriginal rights, including easements or equitable servitudes.
- J. Water rights, claims or title to water.
- K. Defects, liens, encumbrances, adverse claims or other matters, if any, created, first appearing in the Public Records, or attaching subsequent to the effective date hereof but prior to the date the proposed Insured acquires of record for value the estate or interest or mortgage thereon covered by this Commitment.

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**SCHEDULE B**  
(continued)

SPECIAL EXCEPTIONS

1. Easement(s) for the purpose(s) shown below and rights incidental thereto, as granted in a document:

Granted to: Lakehaven Sewer District, a municipal corporation  
Purpose: Sewer mains with the necessary appurtenances  
Recording Date: June 17, 1976  
Recording No.: 7606170594  
Affects: A Southerly portion of Tract A

2. Easement(s) for the purpose(s) shown below and rights incidental thereto, as disclosed by a document:

Granted to: King County Water District No. 124, Puget Sound Power & Light Company and Lakehaven Sewer District  
Purpose: Utilities  
Recording Date: September 3, 1976  
Recording No.: 7609030662  
Affects: Portions of Lot 1 and Tract A

3. Easement(s) for the purpose(s) shown below and rights incidental thereto, as granted in a document:

Granted to: State of Washington  
Purpose: Constructing and maintaining highway slopes in excavation and/or embankment  
Recording Date: October 1, 1976  
Recording No.: 7610010118  
Affects: An Easterly portion of said premises and other property

4. Easement(s) for the purpose(s) shown below and rights incidental thereto, as granted in a document:

Granted to: Puget Sound Power & Light Company, a Washington corporation  
Purpose: Electric transmission and/or distribution lines together with all necessary or convenient appurtenances  
Recording Date: April 18, 1977  
Recording No.: 7704180627  
Affects: A Southerly portion of Tract A

Said easement is a re-recording of easement recorded under recording no. 7607090505.

5. Easement(s) for the purpose(s) shown below and rights incidental thereto, as granted in a document:

Granted to: Lakehaven Sewer District, a municipal corporation  
Purpose: Sewer mains with the necessary appurtenances  
Recording Date: August 30, 1977  
Recording No.: 7708300861  
Affects: A Southerly portion of Lot 6 and other property



**SCHEDULE B**  
(continued)

6. Easement(s) for the purpose(s) shown below and rights incidental thereto, as established by a document:

Purpose: Ingress and egress / access  
Recording Date: September 22, 1977  
Recording No.: 7709220881  
Affects: A portion of said premises and other property

7. Easement(s) for the purpose(s) shown below and rights incidental thereto, as granted in a document:

Granted to: Puget Sound Power & Light Company, a Washington corporation  
Purpose: Underground electric transmission and/or distribution system  
Recording Date: February 7, 1979  
Recording No.: 7902070655  
Affects: Portions of Lot 6 as described in document

8. Easement(s) for the purpose(s) shown below and rights incidental thereto, as granted in a document:

Granted to: Lakehaven Sewer District, a municipal corporation  
Purpose: Sewer mains with the necessary appurtenances  
Recording Date: May 8, 1979  
Recording No.: 7905080915  
Affects: Portions of Lot 6 and Tract A

9. Easement(s) for the purpose(s) shown below and rights incidental thereto, as granted in a document:

Granted to: Puget Sound Power & Light Company, a Washington corporation  
Purpose: Underground electric transmission and/or distribution system together with all necessary or convenient appurtenances  
Recording Date: December 28, 1979  
Recording No.: 7912280536  
Affects: Portion of Lot 6

10. Easement(s) for the purpose(s) shown below and rights incidental thereto, as granted in a document:

Granted to: King County Water District No. 124, a municipal corporation  
Purpose: Water mains, with necessary appurtenances  
Recording Date: February 25, 1980  
Recording No.: 8002250543  
Affects: Portions of Lot 6 and Tract A



**SCHEDULE B**  
(continued)

11. Easement(s) for the purpose(s) shown below and rights incidental thereto, as granted in a document:
- Granted to: Pacific Northwest Bell Telephone Company, a Washington corporation  
Purpose: Underground communication lines, conduit, above ground cabinets and manhole and other appurtenances  
Recording Date: May 14, 1992  
Recording No.: 9205140334  
Affects: A portion of Lot 6
12. Easement(s) for the purpose(s) shown below and rights incidental thereto, as granted in a document:
- Granted to: Washington Natural Gas Company, a Washington corporation  
Purpose: Gas pipeline(s) and appurtenances  
Recording Date: November 18, 1994  
Recording No.: 9411180603  
Affects: A portion of Lot 6
13. Easement(s) for the purpose(s) shown below and rights incidental thereto, as granted in a document:
- Granted to: City of Federal Way, a municipal corporation  
Purpose: Beautification improvements (landscaping, etc.)  
Recording Date: November 17, 2000  
Recording No.: 20001117001156  
Affects: Portions of Tract A
14. Easement(s) for the purpose(s) shown below and rights incidental thereto, as granted in a document:
- Granted to: Wendy's International, Inc., an Ohio corporation  
Purpose: Waterlines  
Recording Date: March 2, 2001  
Recording No.: 20010302002469  
Affects: Portion of Lot 6
15. Easement(s) for the purpose(s) shown below and rights incidental thereto, as granted in a document:
- Granted to: City of Federal Way, a municipal corporation  
Purpose: Surface water facilities  
Recording Date: January 11, 2002  
Recording No.: 20020111002121  
Affects: Portions of Lot 6 and Tract A



**SCHEDULE B**  
(continued)

16. Easement Purchase and Sale Agreement

Between: DCG II LLC, a Washington Limited Liability Company  
And: City of Federal Way  
Recording Date: March 26, 2002  
Recording No.: 20020326002343  
Affects: Portions of Lot 6 and Tract A

17. Easement(s) for the purpose(s) shown below and rights incidental thereto, as granted in a document:

Granted to: Puget Sound Energy, Inc., a Washington corporation  
Purpose: One or more utility systems for transmission, distribution and sale of electricity  
Recording Date: January 15, 2004  
Recording No.: 20040115000654  
Affects: Portion of Tract A

18. Easement(s) for the purpose(s) shown below and rights incidental thereto, as granted in a document:

Granted to: Central Puget Sound Regional Transit Authority  
Purpose: Temporary construction use  
Recording Date: March 16, 2004  
Recording No.: 20040316001735  
Affects: The North 10.00 feet of Lot 6

19. Covenants, conditions, restrictions, recitals, reservations, easements, easement provisions, dedications, building setback lines, notes, statements, and other matters, if any, but omitting any covenants or restrictions, if any, including but not limited to those based upon race, color, religion, sex, sexual orientation, familial status, marital status, disability, handicap, national origin, ancestry, or source of income, as set forth in applicable state or federal laws, except to the extent that said covenant or restriction is permitted by applicable law, as set forth on King County Short Plat No. 1079107:

Recording No: 7912270667

20. Covenants, conditions, restrictions, recitals, reservations, easements, easement provisions, dedications, building setback lines, notes, statements, and other matters, if any, but omitting any covenants or restrictions, if any, including but not limited to those based upon race, color, religion, sex, sexual orientation, familial status, marital status, disability, handicap, national origin, ancestry, or source of income, as set forth in applicable state or federal laws, except to the extent that said covenant or restriction is permitted by applicable law, as set forth on plat of Evergreen Plaza, a planned unit development, recorded in Volume 100 of Plats, Pages 74 and 75:

Recording No: 7608300834



**SCHEDULE B**  
(continued)

21. Covenants, conditions, restrictions, recitals, reservations, easements, easement provisions, dedications, building setback lines, notes, statements, and other matters, if any, but omitting any covenants or restrictions, if any, including but not limited to those based upon race, color, religion, sex, sexual orientation, familial status, marital status, disability, handicap, national origin, ancestry, or source of income, as set forth in applicable state or federal laws, except to the extent that said covenant or restriction is permitted by applicable law, as set forth on plat of Amendment to Evergreen Plaza Binding site Plan/PUD, recorded in Volume 216 of Plats, Pages 36 through 38:

Recording No: 20030909000708

22. Covenants, conditions, restrictions and easements but omitting any covenants or restrictions, if any, including but not limited to those based upon race, color, religion, sex, sexual orientation, familial status, marital status, disability, handicap, national origin, ancestry, source of income, gender, gender identity, gender expression, medical condition or genetic information, as set forth in applicable state or federal laws, except to the extent that said covenant or restriction is permitted by applicable law, as set forth in the document

Recording Date: October 12, 1995  
Recording No.: 9510121424  
Affects; Lot 6

23. Covenants, conditions, restrictions and easements but omitting any covenants or restrictions, if any, including but not limited to those based upon race, color, religion, sex, sexual orientation, familial status, marital status, disability, handicap, national origin, ancestry, source of income, gender, gender identity, gender expression, medical condition or genetic information, as set forth in applicable state or federal laws, except to the extent that said covenant or restriction is permitted by applicable law, as set forth in the document

Recording Date: August 10, 1998  
Recording No.: 9808101434  
Affects: Lot 6

24. Covenants, conditions, restrictions and easements but omitting any covenants or restrictions, if any, including but not limited to those based upon race, color, religion, sex, sexual orientation, familial status, marital status, disability, handicap, national origin, ancestry, source of income, gender, gender identity, gender expression, medical condition or genetic information, as set forth in applicable state or federal laws, except to the extent that said covenant or restriction is permitted by applicable law, as set forth in the document

Recording Date: July 3, 2000  
Recording No.: 20000703001131  
Affects: Lot 6

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**SCHEDULE B**  
(continued)

25. Covenants, conditions, restrictions, recitals, reservations, easements, easement provisions, dedications, building setback lines, notes, statements, and other matters, if any, but omitting any covenants or restrictions, if any, including but not limited to those based upon race, color, religion, sex, sexual orientation, familial status, marital status, disability, handicap, national origin, ancestry, or source of income, as set forth in applicable state or federal laws, except to the extent that said covenant or restriction is permitted by applicable law, as set forth on City of Federal Way Boundary Line Adjustment No. BLA 00-104493:

Recording No: 20010215900003

26. Covenants, conditions, restrictions and easements but omitting any covenants or restrictions, if any, including but not limited to those based upon race, color, religion, sex, sexual orientation, familial status, marital status, disability, handicap, national origin, ancestry, source of income, gender, gender identity, gender expression, medical condition or genetic information, as set forth in applicable state or federal laws, except to the extent that said covenant or restriction is permitted by applicable law, as set forth in the document

Recording Date: March 2, 2001  
Recording No.: 20010302002468  
Affects: Lot 6

27. Covenants, conditions, restrictions and easements but omitting any covenants or restrictions, if any, including but not limited to those based upon race, color, religion, sex, sexual orientation, familial status, marital status, disability, handicap, national origin, ancestry, source of income, gender, gender identity, gender expression, medical condition or genetic information, as set forth in applicable state or federal laws, except to the extent that said covenant or restriction is permitted by applicable law, as set forth in the document

Recording Date: December 30, 2003  
Recording No.: 20031230000248  
Affects: Lot 6, Tract A and other property

28. Agreement

Between: King County Water District No. 124, a municipal corporation  
And: The Rainier Fund  
Recording Date: October 6, 1978  
Recording No.: 7810060768  
Regarding: Domestic water supply

29. Agreement

Between: Lakehaven Sewer Distirct, a municipal corporation  
And: The Rainier Fund  
Recording Date: October 9, 1978  
Recording No.: 7810090769  
Regarding: System of sewage disposal

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**SCHEDULE B**  
(continued)

30. Covenants, conditions, restrictions, recitals, reservations, easements, easement provisions, dedications, building setback lines, notes, statements, and other matters, if any, but omitting any covenants or restrictions, if any, including but not limited to those based upon race, color, religion, sex, sexual orientation, familial status, marital status, disability, handicap, national origin, ancestry, or source of income, as set forth in applicable state or federal laws, except to the extent that said covenant or restriction is permitted by applicable law, as set forth on survey:

Recording No: 8503259001

31. Covenants, conditions, restrictions, recitals, reservations, easements, easement provisions, dedications, building setback lines, notes, statements, and other matters, if any, but omitting any covenants or restrictions, if any, including but not limited to those based upon race, color, religion, sex, sexual orientation, familial status, marital status, disability, handicap, national origin, ancestry, or source of income, as set forth in applicable state or federal laws, except to the extent that said covenant or restriction is permitted by applicable law, as set forth on survey:

Recording No: 9503089002

32. Any rights, interests or claims which may exist or arise by reason of the following matters disclosed by a survey by White & Shield, Inc., dated January 28, 2003, Job No. 2423200050

- A) Curb lying within the temporary construction easement.
- B) Rockery over Northwesterly portion of temporary construction easement.
- C) Storm drain running in a North-South direction through the Easterly portion of the temporary construction easement.
- D) Various utility appurtenances which may lie within easements for same.
- E) Neither drawing nor legal description contained therein reflect the correct legal description (concerns both reference to lot line adjustment and portion deeded for streets).

33. Payment of the real estate excise tax, if required.

The Land is situated within the boundaries of local taxing authority of City of Federal Way.

Present rate of real estate excise tax as of the date herein is 1.78 percent.

Any conveyance document must be accompanied by the official Washington State Excise Tax Affidavit. The applicable excise tax must be paid and the affidavit approved at the time of the recording of the conveyance documents. (NOTE: Real Estate Excise Tax Affidavits must be printed as legal size forms).

An additional \$5.00 Electronic Technology Fee must be included in all excise tax payments.

If the transaction is exempt, an additional \$5.00 Affidavit Processing Fee is required.



**CHICAGO TITLE COMPANY OF WASHINGTON**

**SCHEDULE B**  
(continued)

34. General and special taxes and charges, payable February 15, delinquent if first half unpaid on May 1, second half delinquent if unpaid on November 1 of the tax year (amounts do not include interest and penalties):

Year: 2016  
Tax Account No.: 242320-0010-09  
Levy Code: 1202  
Assessed Value-Land: \$11,000.00  
Assessed Value-Improvements: \$0.00

General and Special Taxes:

Billed: \$163.25  
Paid: \$81.63  
Unpaid: \$81.62

Affects: Lot 1

35. General and special taxes and charges, payable February 15, delinquent if first half unpaid on May 1, second half delinquent if unpaid on November 1 of the tax year (amounts do not include interest and penalties):

Year: 2016  
Tax Account No.: 242320-0050-00  
Levy Code: 1202  
Assessed Value-Land: \$5,898,200.00  
Assessed Value-Improvements: \$6,544,400.00

General and Special Taxes: Billed: \$191,805.40  
Paid: \$95,902.70  
Unpaid: \$95,902.70

Affects: Lot 6

36. General and special taxes and charges, payable February 15, delinquent if first half unpaid on May 1, second half delinquent if unpaid on November 1 of the tax year (amounts do not include interest and penalties):

Year: 2016  
Tax Account No.: 242320-0060-08  
Levy Code: 1202  
Assessed Value-Land: \$103,600.00  
Assessed Value-Improvements: \$0.00

General and Special Taxes: Billed: \$3,212.26  
Paid: \$1,606.13  
Unpaid: \$1,606.13

Affects; Tract A

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**SCHEDULE B**  
(continued)

37. Liability for Sewer Treatment Capacity Charges, if any, affecting certain areas of King, Pierce and Snohomish Counties. Said charges could apply to property connecting to the metropolitan sewerage facilities or reconnecting or changing its use and/or structure after February 1, 1990. Please contact the King County Wastewater Treatment Division, Capacity Charge Program, for further information at 206-296-1450 or Fax No. 206-263-6823 or email at [CapChargeEscrow@kingcounty.gov](mailto:CapChargeEscrow@kingcounty.gov).

\* A map showing sewer service area boundaries and incorporated areas can be found at:  
[http://your.kingcounty.gov/ftp/gis/Web/VMC/utilities/servarea\\_cities.pdf](http://your.kingcounty.gov/ftp/gis/Web/VMC/utilities/servarea_cities.pdf)

Unrecorded Sewer Capacity Charges are not a lien on title to the Land.

NOTE: This exception will not appear in the policy to be issued.

38. A deed of trust to secure an indebtedness in the amount shown below,

Amount: \$7,700,000.00  
Dated: August 18, 2014  
Trustor/Grantor: Winson at Federal Way, LLC  
Trustee: First American Title Insurance Company  
Beneficiary: East West Bank  
Recording Date: August 25, 2014  
Recording No.: 20140825001072

39. Assignment of Rents and Leases

Assigned to: East West Bank  
Assigned by: Winson at Federal Way LLC  
Recording Date: August 25, 2014  
Recording No.: 20140825001073

40. Indemnity Agreement regarding hazardous substances:

Grantor: Winson at Federal Way LLC  
Grantee: East West Bank  
Recording Date: August 25, 2014  
Recording No.: 20140825001074

41. An unrecorded lease with certain terms, covenants, conditions and provisions set forth therein as disclosed by the document

Entitled: Subordination Agreement and agreement of non-disturbance and attornment  
Lessor: Winson at Federal Way LLC  
Lessee: Evergreen State Restaurant Limited Partnership No. 4 dba Outback Steakhouse  
Recording Date: September 19, 2014  
Recording No.: 20140919001069

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**SCHEDULE B**  
(continued)

42. Subordination, Nondisturbance and Attornment Agreement, and the terms and conditions thereof:

Lender: East West Bank  
Tenant: Evergreen State Restaurant Limited Partnership No. 4 dba Outback Steakhouse  
Landlord: Winson at Federal Way LLC  
Recording Date: September 19, 2014  
Recording No.: 20140919001069

43. Any unrecorded leaseholds, right of vendors and holders of security interests on personal property installed upon the Land and rights of tenants to remove trade fixtures at the expiration of the terms.

44. The Company will require the following documents for review prior to the issuance of any title insurance predicated upon a conveyance or encumbrance from the entity named below.

Limited Liability Company: Winson at Federal Way, LLC

- a. A copy of its operating agreement, if any, and any and all amendments, supplements and/or modifications thereto, certified by the appropriate manager or member.
- b. If a domestic Limited Liability Company, a copy of its Articles of Organization and all amendment thereto with the appropriate filing stamps.
- c. If the Limited Liability Company is member-managed a full and complete current list of members certified by the appropriate manager or member.
- d. If the Limited Liability Company was formed in a foreign jurisdiction, evidence, satisfactory to the Company that it was validly formed, is in good standing and authorized to do business in the state of origin.
- e. If less than all members, or managers, as appropriate, will be executing the closing documents, furnish evidence of the authority of those signing.

The Company reserves the right to add additional items or make further requirements after review of the requested documentation.

45. Any instrument to be executed by Central Puget Sound Regional Transit Authority must be in accordance with statute. Satisfactory evidence of authority must be submitted.

The Company reserves the right to except additional items and/or make additional requirements after reviewing said documents.

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**SCHEDULE B**  
(continued)

46. Your application for title insurance was placed by reference to only a street address or tax identification number. Based on our records, we believe that the legal description in this report covers the parcel(s) of Land that you requested. If the legal description is incorrect, the seller/borrower must notify the Company and/or the settlement company in order to prevent errors and to be certain that the correct parcel(s) of Land will appear on any documents to be recorded in connection with this transaction and on the policy of title insurance.

**END OF EXCEPTIONS**

**NOTES**

The following matters will not be listed as Special Exceptions in Schedule B of the policy. There will be no coverage for loss arising by reason of the matters listed below because these matters are either excepted or excluded from coverage or are not matters covered under the insuring provisions of the policy.

Note A: Note: FOR INFORMATIONAL PURPOSES ONLY:

The following may be used as an abbreviated legal description on the documents to be recorded, per Amended RCW 65.04.045. Said abbreviated legal description is not a substitute for a complete legal description within the body of the document:

Lots 1 and 6 and Tract A of Amendment to Evergreen Plaza Binding Site Plan  
Tax Account No.: 242320-0010-09, 242320-0050-00 and 242320-0060-08

Note B: Note: Any map furnished with this Commitment is for convenience in locating the land indicated herein with reference to streets and other land. No liability is assumed by reason of reliance thereon.

**END OF NOTES**

**END OF SCHEDULE B**



**CONDITIONS**

1. The term mortgage, when used herein, shall include deed of trust, trust deed, or other security instrument.
2. If the proposed Insured has or acquired actual knowledge of any defect, lien, encumbrance, adverse claim or other matter affecting the estate or interest or mortgage thereon covered by this Commitment other than those shown in Schedule B hereof, and shall fail to disclose such knowledge to the Company in writing, the Company shall be relieved from liability for any loss or damage resulting from any act of reliance hereon to the extent the Company is prejudiced by failure to so disclose such knowledge. If the proposed Insured shall disclose such knowledge to the Company, or if the Company otherwise acquires actual knowledge of any such defect, lien, encumbrance, adverse claim or other matter, the Company at its option may amend Schedule B of this Commitment accordingly, but such amendment shall not relieve the Company from liability previously incurred pursuant to paragraph 3 of these Conditions.
3. Liability of the Company under this Commitment shall be only to the named proposed Insured and such parties included under the definition of Insured in the form of policy or policies committed for and only for actual loss incurred in reliance hereon in undertaking in good faith (a) to comply with the requirements hereof, or (b) to eliminate exceptions shown in Schedule B, or (c) to acquire or create the estate or interest or mortgage thereon covered by this Commitment. In no event shall such liability exceed the amount stated in Schedule A for the policy or policies committed for and such liability is subject to the insuring provisions and Conditions and the Exclusions from Coverage of the form of policy or policies committed for in favor of the proposed Insured which are hereby incorporated by reference and are made a part of this Commitment except as expressly modified herein.
4. This Commitment is a contract to issue one or more title insurance policies and is not an abstract of title or a report of the condition of title. Any action or actions or rights of action that the proposed Insured may have or may bring against the Company arising out of the status of the title to the estate or interest or the status of the mortgage thereon covered by this Commitment must be based on and are subject to the provisions of this Commitment.
5. *The policy to be issued contains an arbitration clause. All arbitrable matters when the Amount of Insurance is \$2,000,000 or less shall be arbitrated at the option of either the Company or the Insured as the exclusive remedy of the parties. You may review a copy of the arbitration rules at <http://www.alta.org>.*

**END OF CONDITIONS**

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## RECORDING REQUIREMENTS

Effective January 1, 1997, document format and content requirements have been imposed by Washington Law. Failure to comply with the following requirements may result in rejection of the document by the county recorder or imposition of a \$50.00 surcharge.

### First page or cover sheet:

3" top margin containing nothing except the return address.

1" side and bottom margins containing no markings or seals.

Title(s) of documents.

Recording no. of any assigned, released or referenced document(s).

Grantors names (and page no. where additional names can be found).

Grantees names (and page no. where additional names can be found).

Abbreviated legal description (Lot, Block, Plat Name or Section, Township, Range and Quarter, Quarter Section for unplatted). Said abbreviated legal description is not a substitute for a complete legal description which must also appear in the body of the document.

Assessor's tax parcel number(s).

Return address (in top 3" margin).

\*\*A cover sheet can be attached containing the above format and data if the first page does not contain all required data.

### Additional Pages:

1" top, side and bottom margins containing no markings or seals.

### All Pages:

No stapled or taped attachments. Each attachment must be a separate page. All notary and other pressure seals must be smudged for visibility. Font size of 8 points or larger.

**FIDELITY NATIONAL FINANCIAL, INC.**  
**PRIVACY NOTICE**  
**Effective: April 1, 2016**

**Order No.:** 0075348-06

At Fidelity National Financial, Inc. and its majority-owned subsidiary companies (collectively, "FNF", "our" or "we"), we value the privacy of our customers. This Privacy Notice explains how we collect, use, and protect your information and explains the choices you have regarding that information. A summary of our privacy practices is below. We also encourage you to read the complete Privacy Notice following the summary.

<p><b><u>Types of Information Collected.</u></b> You may provide us with certain personal information, like your contact information, social security number (SSN), driver's license, other government ID numbers, and/or financial information. We may also receive information from your Internet browser, computer and/or mobile device.</p>	<p><b><u>How Information is Collected.</u></b> We may collect personal information directly from you from applications, forms, or communications we receive from you, or from other sources on your behalf, in connection with our provision of products or services to you. We may also collect browsing information from your Internet browser, computer, mobile device or similar equipment. This browsing information is generic and reveals nothing personal about the user.</p>
<p><b><u>Use of Your Information.</u></b> We may use your information to provide products and services to you (or someone on your behalf), to improve our products and services, and to communicate with you about our products and services. We do not give or sell your personal information to parties outside of FNF for their use to market their products or services to you.</p>	<p><b><u>Security Of Your Information.</u></b> We utilize a combination of security technologies, procedures and safeguards to help protect your information from unauthorized access, use and/or disclosure. We communicate to our employees about the need to protect personal information.</p>
<p><b><u>Choices With Your Information.</u></b> Your decision to submit personal information is entirely up to you. You can opt-out of certain disclosures or use of your information or choose to not provide any personal information to us.</p>	<p><b><u>When We Share Information.</u></b> We may disclose your information to third parties providing you products and services on our behalf, law enforcement agencies or governmental authorities, as required by law, and to parties with whom you authorize us to share your information.</p>
<p><b><u>Information From Children.</u></b> We do not knowingly collect information from children under the age of thirteen (13), and our websites are not intended to attract children.</p>	<p><b><u>Privacy Outside the Website.</u></b> We are not responsible for the privacy practices of third parties, even if our website links to those parties' websites.</p>
<p><b><u>Access and Correction.</u></b> If you desire to see the information collected about you and/or correct any inaccuracies, please contact us in the manner specified in this Privacy Notice.</p>	<p><b><u>Do Not Track Disclosures.</u></b> We do not recognize "do not track" requests from Internet browsers and similar devices.</p>
<p><b><u>The California Online Privacy Protection Act.</u></b> Certain FNF websites collect information on behalf of mortgage loan servicers. The mortgage loan servicer is responsible for taking action or making changes to any consumer information submitted through those websites.</p>	<p><b><u>International Use.</u></b> By providing us with your information, you consent to the transfer, processing and storage of such information outside your country of residence, as well as the fact that we will handle such information consistent with this Privacy Notice.</p>
<p><b><u>Your Consent To This Privacy Notice.</u></b> By submitting information to us and using our websites, you are accepting and agreeing to the terms of this Privacy Notice.</p>	<p><b><u>Contact FNF.</u></b> If you have questions or wish to contact us regarding this Privacy Notice, please use the contact information provided at the end of this Privacy Notice.</p>

## FIDELITY NATIONAL FINANCIAL, INC. PRIVACY NOTICE

FNF respects and is committed to protecting your privacy. We pledge to take reasonable steps to protect your Personal Information (as defined herein) and to ensure your information is used in compliance with this Privacy Notice.

This Privacy Notice is only in effect for information collected and/or owned by or on behalf of FNF, including collection through any FNF website or online services offered by FNF (collectively, the "Website"), as well as any information collected offline (e.g., paper documents). The provision of this Privacy Notice to you does not create any express or implied relationship, nor create any express or implied duty or other obligation, between FNF and you.

### **Types of Information Collected**

We may collect two (2) types of information: Personal Information and Browsing Information.

**Personal Information.** The types of personal information FNF collects may include, but are not limited to:

- contact information (e.g., name, address, phone number, email address);
- social security number (SSN), driver's license, and other government ID numbers; and
- financial account or loan information.

**Browsing Information.** The types of browsing information FNF collects may include, but are not limited to:

- Internet Protocol (or IP) address or device ID/UDID, protocol and sequence information;
- browser language;
- browser type;
- domain name system requests;
- browsing history;
- number of clicks;
- hypertext transfer protocol headers; and
- application client and server banners.

### **How Information is Collected**

In the course of our business, we may collect *Personal Information* about you from the following sources:

- applications or other forms we receive from you or your authorized representative, whether electronic or paper;
- communications to us from you or others;
- information about your transactions with, or services performed by, us, our affiliates or others; and
- information from consumer or other reporting agencies and public records that we either obtain directly from those entities, or from our affiliates or others.

We may collect *Browsing Information* from you as follows:

- **Browser Log Files.** Our servers automatically log, collect and record certain Browsing Information about each visitor to the Website. The Browsing Information includes only generic information and reveals nothing personal about the user.
- **Cookies.** From time to time, FNF may send a "cookie" to your computer when you visit the Website. A cookie is a small piece of data that is sent to your Internet browser from a web server and stored on your computer's hard drive. When you visit the Website again, the cookie allows the Website to recognize your computer, with the goal of providing an optimized user experience. Cookies may store user preferences and other information. You can choose not to accept cookies by changing the settings of your Internet browser. If you choose not to accept cookies, then some functions of the Website may not work as intended.

### **Use of Collected Information**

Information collected by FNF is used for three (3) main purposes:

- To provide products and services to you, or to one or more third party service providers who are performing services on your behalf or in connection with a transaction involving you;
- To improve our products and services; and
- To communicate with you and to inform you about FNF's products and services.

### **When We Share Information**

We may share your Personal Information (excluding information we receive from consumer or other credit reporting agencies) and Browsing Information with certain individuals and companies, as permitted by law, without first obtaining your authorization. Such disclosures may include, without limitation, the following:

- to agents, representatives, or others to provide you with services or products you have requested, and to enable us to detect or prevent criminal activity, fraud, or material misrepresentation or nondisclosure;
- to third-party contractors or service providers who provide services or perform other functions on our behalf;
- to law enforcement or other governmental authority in connection with an investigation, or civil or criminal subpoenas or court orders; and/or
- to other parties authorized to receive the information in connection with services provided to you or a transaction involving you.

We may disclose Personal Information and/or Browsing Information when required by law or in the good-faith belief that such disclosure is necessary to:

- comply with a legal process or applicable laws;
- enforce this Privacy Notice;
- investigate or respond to claims that any information provided by you violates the rights of a third party; or
- protect the rights, property or personal safety of FNF, its users or the public.

We make efforts to ensure third party contractors and service providers who provide services or perform functions on our behalf protect your information. We limit use of your information to the purposes for which the information was provided. We do not give or sell your information to third parties for their own direct marketing use.

We reserve the right to transfer your Personal Information, Browsing Information, as well as any other information, in connection with the sale or other disposition of all or part of the FNF business and/or assets, or in the event of our bankruptcy, reorganization, insolvency, receivership or an assignment for the benefit of creditors. You expressly agree and consent to the use and/or transfer of this information in connection with any of the above described proceedings. We cannot and will not be responsible for any breach of security by any third party or for any actions of any third party that receives any of the information that is disclosed to us.

#### **Choices With Your Information**

Whether you submit your information to FNF is entirely up to you. If you decide not to submit your information, FNF may not be able to provide certain products or services to you. You may choose to prevent FNF from using your information under certain circumstances ("opt out"). You may opt out of receiving communications from us about our products and/or services.

#### **Security And Retention Of Information**

FNF is committed to protecting the information you share with us and utilizes a combination of security technologies, procedures and safeguards to help protect it from unauthorized access, use and/or disclosure. FNF trains its employees on privacy practices and on FNF's privacy and information security policies. FNF works hard to retain information related to you only as long as reasonably necessary for business and/or legal purposes.

#### **Information From Children**

The Website is meant for adults. The Website is not intended or designed to attract children under the age of thirteen (13). We do not collect Personal Information from any person that we know to be under the age of thirteen (13) without permission from a parent or guardian.

#### **Access and Correction**

To access your Personal Information in the possession of FNF and correct inaccuracies, please contact us by email at [privacy@fnf.com](mailto:privacy@fnf.com) or by mail at:

Fidelity National Financial, Inc.  
601 Riverside Avenue  
Jacksonville, Florida 32204  
Attn: Chief Privacy Officer

#### **Your Consent To This Privacy Notice**

By submitting Personal Information and/or Browsing Information to FNF, you consent to the collection and use of information by FNF in compliance with this Privacy Notice. We reserve the right to make changes to this Privacy Notice. If we change this Privacy Notice, we will post the revised version on the Website.

#### **Privacy Outside the Website**

The Website may contain links to other websites, including links to websites of third party service providers. FNF is not and cannot be responsible for the privacy practices or the content of any of those other websites.

#### **International Users**

Because FNF's headquarters is located in the United States, we may transfer your Personal Information and/or Browsing Information to the United States. By using our website and providing us with your Personal Information and/or Browsing Information, you understand and consent to the transfer, processing and storage of such information outside your country of residence, as well as the fact that we will handle such information consistent with this Privacy Notice.

#### **Do Not Track Disclosures**

Currently, our policy is that we do not recognize "do not track" requests from Internet browsers and similar devices.

#### **The California Online Privacy Protection Act**

For some websites which FNF or one of its companies owns, such as the Customer CareNet ("CCN"), FNF is acting as a third party service provider to a mortgage loan servicer. In those instances, we may collect certain information on behalf of that mortgage loan servicer, including:

- first and last name;
- property address;
- user name and password;
- loan number;
- social security number - masked upon entry;
- email address;
- security questions and answers; and
- IP address.

The information you submit is then transferred to your mortgage loan servicer by way of CCN. **The mortgage loan servicer is responsible for taking action or making changes to any consumer information submitted through this website. For example, if you believe that your payment or user information is incorrect, you must contact your mortgage loan servicer.**

CCN does not share consumer information with third parties, other than those with which the mortgage loan servicer has contracted to interface with the CCN application. All sections of this Privacy Notice apply to your interaction with CCN, except for the sections titled Choices with Your Information, and Access and Correction. If you have questions regarding the choices you have with regard to your personal information or how to access or correct your personal information, contact your mortgage loan servicer.

#### **Contact FNF**

Please send questions and/or comments related to this Privacy Notice by email at [privacy@fnf.com](mailto:privacy@fnf.com) or by mail at:

Fidelity National Financial, Inc.  
601 Riverside Avenue  
Jacksonville, Florida 32204  
Attn: Chief Privacy Officer

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EFFECTIVE AS OF APRIL 1, 2016



After recording return to:  
**Winson at Federal Way LLC**  
8636 NE 7th Street  
Medina, WA 98039



**20140825001071**

FIDELITY (MAJOR) 78.00  
PAGE-001 OF 007  
08/25/2014 15:34  
KING COUNTY, WA

**E2686722**

08/25/2014 15:25  
KING COUNTY, WA  
TAX \$213,605.00  
SALE \$12,000,000.00

PAGE-001 OF 001

Reference: 20369453- -410- -MP2

**STATUTORY WARRANTY DEED**

THE GRANTOR(S) **Byung Chan Park and Young Su Park, husband and wife**, for and in consideration of Ten (\$10.00) Dollars and other good and valuable consideration in hand paid, conveys and warrants to **Winson at Federal Way LLC, a Washington limited liability company** the following described real estate, situated in the County of **King**, State of **Washington**:

LOTS 1 AND 6 AND TRACT A OF AMENDMENT TO EVERGREEN PLAZA BINDING SITE PLAN / PUD, RECORDED SEPTEMBER 9, 2003 UNDER RECORDING NO. 20030909000708 IN VOLUME 216, PAGES 36 TO 38, IN KING COUNTY, WASHINGTON;

EXCEPTING THEREFROM THAT PORTION CONVEYED TO THE CITY OF FEDERAL WAY BY DEED RECORDED UNDER KING COUNTY RECORDING NO. 20050524000385.

SITUATE IN THE CITY OF FEDERAL WAY, COUNTY OF KING, STATE OF WASHINGTON.

Subject to: Those items specifically set forth on Exhibit "A" attached hereto.

Tax Parcel Number(s): 242320 0050, , 242320 0060, 2423200010

Recorded at the request of  
**FIDELITY NATIONAL TITLE**  
**MAJOR ACCOUNTS**

Order # 20369453 7/78

Reference: Statutory Warranty Deed **20369453 410 MP2**

Dated: **August 18, 2014**

*Byung Chan Park*  
Byung Chan Park

*Young Su Park*  
Young Su Park

State of Washington

SS:

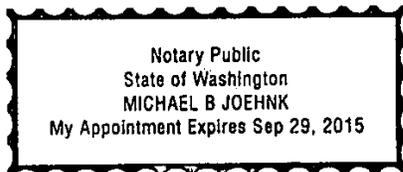
County of SNOHOMISH

On this 21<sup>st</sup> day of AUGUST, 2014, before me personally appeared BYUNG CHAN PARK & YOUNG SU PARK to me known to be the individual(s) described in and who executed the within and foregoing instrument, and acknowledged that They signed the same as THEIR free and voluntary act and deed for the uses and purposes therein mentioned.

Given under my hand and official seal the day and year last above written.

*Michael B Joehnk*

Notary Public in and for the State of WA  
Residing at EDMONDS  
My Appointment expires: 9.29-15



## Exhibit A

## Subject to:

1.

**EASEMENT AND THE TERMS AND CONDITIONS THEREOF:**

**GRANTEE:** Lakehaven sewer district, a municipal corporation  
**PURPOSE:** sewer mains  
**AREA AFFECTED:** A PORTION OF tract a  
**RECORDED:** June 17, 1976  
**RECORDING NO.:** 7606170594

2.

**EASEMENT AND THE TERMS AND CONDITIONS THEREOF:**

**GRANTEE:** Puget Sound Power & Light Company, a Washington corporation  
**PURPOSE:** Electric transmission and distribution lines  
**AREA AFFECTED:** A PORTION OF tract a  
**RECORDED:** April 18, 1977  
**RECORDING NO.:** 7704180627

Said easement is a re-recording of the easement recorded on July 9, 1976, under King County Recording No. 7607090505.

3.

**ALL COVENANTS, CONDITIONS, RESTRICTIONS, but omitting any covenants or restrictions, if any, based upon race, color, religion, sex, sexual orientation, familial status, marital status, disability, handicap, national origin, ancestry, or source of income, as set forth in applicable state or federal laws, except to the extent that said covenant or restriction is permitted by applicable law, RESERVATIONS, EASEMENTS OR OTHER SERVITUDES, IF ANY, DISCLOSED BY THE RECORDED planned unit development OF evergreen plaza in volume 100 pages 74 and 75 .**

said pud amended by instrument recorded under recording number 20030909000708

4.

**EASEMENT AND THE TERMS AND CONDITIONS THEREOF:**

**Disclosed BY:** Ordinance No. 2813  
**PURPOSE:** Public utilities  
**AREA AFFECTED:** LOT 1 AND tract a  
**RECORDED:** September 3, 1976  
**RECORDING NO.:** 7609030662

**Exhibit A  
(Continued)**

5. **EASEMENT AND THE TERMS AND CONDITIONS THEREOF:**  
**GRANTEE:** Lakehaven sewer district, a municipal corporation  
**PURPOSE:** sewer mains  
**AREA AFFECTED:** A PORTION OF lot 6  
**RECORDED:** August 30, 1977  
**RECORDING NO.:** 7708300861
6. **Reciprocal non-exclusive easement AND THE TERMS AND CONDITIONS THEREOF:**  
**RECORDED:** September 22, 1977  
**RECORDING NO.:** 7709220881  
**REGARDING:** Access, ingress and egress
7. **AGREEMENT AND THE TERMS AND CONDITIONS THEREOF:**  
**RECORDED:** October 6, 1978  
**RECORDING NO.:** 7810060768  
**REGARDING:** Domestic water supply  
**Affects:** Lot 6
8. **AGREEMENT AND THE TERMS AND CONDITIONS THEREOF:**  
**RECORDED:** October 9, 1978  
**RECORDING NO.:** 7810090769  
**REGARDING:** Sewage disposal system
9. **Easement for UNDERGROUND electric system AND THE TERMS AND CONDITIONS THEREOF:**  
**GRANTEE:** Puget Sound Power & Light Company, a Washington  
**AREA AFFECTED:** A PORTION OF tract 6  
**RECORDED:** February 7, 1979  
**RECORDING NO.:** 7902070655  
 Contains covenant prohibiting structures over said easement or other activity which might endanger the underground system.
10. **EASEMENT AND THE TERMS AND CONDITIONS THEREOF:**  
**GRANTEE:** Lakehaven sewer district, a municipal corporation  
**PURPOSE:** sewer mains  
**AREA AFFECTED:** A PORTION OF SAID PREMISES  
**RECORDED:** May 8, 1979  
**RECORDING NO.:** 7905080915

**Exhibit A  
(Continued)**

11.

**EASEMENT AND THE TERMS AND CONDITIONS THEREOF:**

**GRANTEE:** King county water district no. 124, a municipal corporation  
**PURPOSE:** Water mains  
**AREA AFFECTED:** A PORTION OF SAID PREMISES  
**RECORDED:** February 25, 1980  
**RECORDING NO.:** 8002250543

12.

**EASEMENT AND THE TERMS AND CONDITIONS THEREOF:**

**GRANTEE:** Pacific Northwest Bell Telephone Company, a Washington corporation  
**PURPOSE:** Communication lines, conduit  
**AREA AFFECTED:** A PORTION OF SAID PREMISES  
**RECORDED:** May 14, 1992  
**RECORDING NO.:** 9205140334

13.

**EASEMENT AND THE TERMS AND CONDITIONS THEREOF:**

**GRANTEE:** Washington natural gas company, a Washington corporation  
**PURPOSE:** Gas pipeline(s)  
**AREA AFFECTED:** A PORTION OF SAID PREMISES  
**RECORDED:** November 18, 1994  
**RECORDING NO.:** 9411180603

14.

**Restrictive Covenant THE TERMS AND CONDITIONS THEREOF:**

**RECORDED:** October 12, 1995  
**RECORDING NO.:** 9510121424  
**REGARDING:** soil contaminants

15.

**Restrictive Covenant THE TERMS AND CONDITIONS THEREOF:**

**RECORDED:** August 10, 1998  
**RECORDING NO.:** 9808101434  
**REGARDING:** Soil contaminants

**Affects:** Lot 6

**Exhibit A  
(Continued)**

16. **Declaration of EASEMENTS and Covenants AND THE TERMS AND CONDITIONS THEREOF:**
- GRANTEE:** Wendy's International, inc., an Ohio corporation  
**PURPOSE:** Parking, driveways, trash enclosure, signage and landscaping  
**AREA AFFECTED:** A PORTION OF lot 6  
**RECORDED:** July 3, 2000  
**RECORDING NO.:** 20000703001131
17. **Permanent beautification EASEMENT AND THE TERMS AND CONDITIONS THEREOF:**
- GRANTEE:** City of Federal Way, a Washington municipal corporation  
**AREA AFFECTED:** A PORTION OF tract a  
**RECORDED:** November 17, 2000  
**RECORDING NO.:** 20001117001156
18. **ALL COVENANTS, CONDITIONS, RESTRICTIONS, but omitting any covenants or restrictions, if any, based upon race, color, religion, sex, sexual orientation, familial status, marital status, disability, handicap, national origin, ancestry, or source of income, as set forth in applicable state or federal laws, except to the extent that said covenant or restriction is permitted by applicable law, RESERVATIONS, EASEMENTS OR OTHER SERVITUDES, IF ANY, DISCLOSED BY THE BOUNDARY LINE ADJUSTMENT RECORDED UNDER RECORDING NO. 20010215900003.**
18. **EASEMENT AND THE TERMS AND CONDITIONS THEREOF:**
- GRANTEE:** Wendy's International Inc., an Ohio Corporation  
**PURPOSE:** water lines  
**AREA AFFECTED:** A PORTION OF SAID PREMISES  
**RECORDED:** March 2, 2001  
**RECORDING NO.:** 20010302002469
20. **Permanent and Temporary Construction EASEMENT for surface water facilities AND THE TERMS AND CONDITIONS THEREOF:**
- GRANTEE:** City of Federal Way, a Washington municipal corporation  
**AREA AFFECTED:** A PORTION OF SAID PREMISES  
**RECORDED:** January 11, 2002  
**RECORDING NO.:** 20020111002121

**21. Easement and Purchase and Sale AGREEMENT AND THE TERMS AND CONDITIONS THEREOF:**

**RECORDED:** March 26, 2002  
**RECORDING NO.:** 20020326002343  
**REGARDING:** Formation of a limited improvement district

**22. Declaration of Easements and Covenants AND THE TERMS AND CONDITIONS THEREOF:**

**RECORDED:** December 30, 2003  
**RECORDING NO.:** 20031230000248

**23. EASEMENT AND THE TERMS AND CONDITIONS THEREOF:**

**GRANTEE:** Puget Sound Energy, Inc., a Washington corporation  
**PURPOSE:** utility systems  
**AREA AFFECTED:** A PORTION OF Tract A  
**RECORDED:** January 15, 2004  
**RECORDING NO.:** 20040115000654

**24. MEMORANDUM OF LEASE:**

**LESSOR:** Seatac plaza limited partnership, a Washington limited partnership  
**LESSEE:** Evergreen State Limited Partnership No. 4, a Washington limited partnership, d/b/a outback steakhouse  
**DATED:** September 21, 1995  
**RECORDED:** April 2, 1996  
**RECORDING NO.:** 9604020570

Lessee's interest in the lease is was assigned by instrument.

**ASSIGNEE:** U.S. Bank of Washington, national association  
**RECORDING NO.:** 9605060321

**25. MATTERS SET FORTH BY SURVEY:**

**RECORDED:** March 25, 1985  
**RECORDING NO.:** 8503259001

**26. MATTERS SET FORTH BY SURVEY:**

**RECORDED:** March 8, 1995  
**RECORDING NO.:** 9503089002

**27. Matters of survey by White & Shield, Inc., dated January 28, 2003, Job No. 24320050.**

# AMENDMENT TO EVERGREEN PLAZA BINDING SITE PLAN/ PUD

THAT PORTION OF THE SE1/4 OF THE SW 1/4  
OF SECTION 9, TOWNSHIP 21 NORTH, RANGE 4 EAST, W.M.  
CITY OF FEDERAL WAY, WASHINGTON

## DEDICATION

WE, THE UNDERSIGNED OWNERS OF THE HEREIN DESCRIBED PROPERTIES, MAKE A SUBDIVISION GRAPHICALLY REPRESENTED BY ATTACHED BINDING SITE PLAN.

D. Michael Dunne  
BY: BSP LOT # 1, 5 AND 6  
Richard Day  
BY: BSP LOT # 2  
Summy Coleman  
BY: BSP LOT # 3

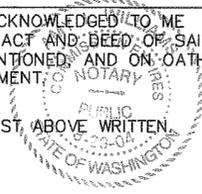
Mouir H. Touh  
BY: BSP LOT # 7  
Kerri B. Anderson  
BY: BSP LOT # 7  
Kerri B. Anderson  
Executive Vice President &  
Chief Financial Officer  
LAW DEPT. WWS

## ACKNOWLEDGMENTS

STATE OF WASHINGTON )  
COUNTY OF KING )

THIS IS TO CERTIFY THAT ON THIS 12<sup>th</sup> DAY OF March, 2003 BEFORE ME, THE UNDERSIGNED, A NOTARY PUBLIC, PERSONALLY APPEARED D. Michael Dunne Managing partner OF DCATE LLC THAT EXECUTED THE FOREGOING DEDICATION, AND WHO ACKNOWLEDGED TO ME THE SAID INSTRUMENT TO BE THE FREE AND VOLUNTARY ACT AND DEED OF SAID ASSOCIATION, FOR THE USES AND PURPOSES THEREIN MENTIONED, AND ON OATH STATED THAT HE WAS AUTHORIZED TO EXECUTE THE SAID INSTRUMENT.

WITNESS MY HAND OFFICIAL SEAL THE DAY AND YEAR FIRST ABOVE WRITTEN.  
Amy L. Williams  
NOTARY PUBLIC IN AND FOR THE STATE OF WASHINGTON, RESIDING AT Kent 98032



STATE OF Ohio )  
COUNTY OF Franklin )

THIS IS TO CERTIFY THAT ON THIS 28<sup>th</sup> DAY OF March, 2003, BEFORE ME, THE UNDERSIGNED, A NOTARY PUBLIC, PERSONALLY APPEARED Kerri B. Anderson Executive Vice President + CFO OF Wendy's International, Inc THAT EXECUTED THE FOREGOING DEDICATION, AND WHO ACKNOWLEDGED TO ME THE SAID INSTRUMENT TO BE THE FREE AND VOLUNTARY ACT AND DEED OF SAID ASSOCIATION, FOR THE USES AND PURPOSES THEREIN MENTIONED, AND ON OATH STATED THAT HE WAS AUTHORIZED TO EXECUTE THE SAID INSTRUMENT.

WITNESS MY HAND OFFICIAL SEAL THE DAY AND YEAR FIRST ABOVE WRITTEN.

Darcy B. Mihal  
NOTARY PUBLIC IN AND FOR THE STATE OF Ohio RESIDING AT 5346 Dale Dr Columbus, OH 43220



STATE OF South Carolina )  
COUNTY OF SPARTANBURG )

THIS IS TO CERTIFY THAT ON THIS 23<sup>rd</sup> DAY OF July, 2003 BEFORE ME, THE UNDERSIGNED, A NOTARY PUBLIC, PERSONALLY APPEARED Mounir N. Sawda Vice President OF Jenny's Beauty Inc THAT EXECUTED THE FOREGOING DEDICATION, AND WHO ACKNOWLEDGED TO ME THE SAID INSTRUMENT TO BE THE FREE AND VOLUNTARY ACT AND DEED OF SAID ASSOCIATION, FOR THE USES AND PURPOSES THEREIN MENTIONED, AND ON OATH STATED THAT HE WAS AUTHORIZED TO EXECUTE THE SAID INSTRUMENT.

WITNESS MY HAND OFFICIAL SEAL THE DAY AND YEAR FIRST ABOVE WRITTEN.

Timothy E. Flemming  
TIMOTHY E. FLEMMING  
NOTARY PUBLIC  
NOTARY PUBLIC IN AND FOR THE STATE OF South Carolina RESIDING AT 100 Dog Hill Road Anderson, SC 29356  
MY COMMISSION EXPIRES APRIL 22, 2004



STATE OF Wash )  
COUNTY OF King )

THIS IS TO CERTIFY THAT ON THIS 30<sup>th</sup> DAY OF July, 2003 BEFORE ME, THE UNDERSIGNED, A NOTARY PUBLIC, PERSONALLY APPEARED Richard Day OF Wash Federal Realty THAT EXECUTED THE FOREGOING DEDICATION, AND WHO ACKNOWLEDGED TO ME THE SAID INSTRUMENT TO BE THE FREE AND VOLUNTARY ACT AND DEED OF SAID ASSOCIATION, FOR THE USES AND PURPOSES THEREIN MENTIONED, AND ON OATH STATED THAT HE WAS AUTHORIZED TO EXECUTE THE SAID INSTRUMENT.

WITNESS MY HAND OFFICIAL SEAL THE DAY AND YEAR FIRST ABOVE WRITTEN.

Ma Bazi  
NOTARY PUBLIC IN AND FOR THE STATE OF WA RESIDING AT Maple



STATE OF Wash )  
COUNTY OF King )

THIS IS TO CERTIFY THAT ON THIS 31<sup>st</sup> DAY OF July, 2003, BEFORE ME, THE UNDERSIGNED, A NOTARY PUBLIC, PERSONALLY APPEARED Bradley Lindsay OF Arco THAT EXECUTED THE FOREGOING DEDICATION, AND WHO ACKNOWLEDGED TO ME THE SAID INSTRUMENT TO BE THE FREE AND VOLUNTARY ACT AND DEED OF SAID ASSOCIATION, FOR THE USES AND PURPOSES THEREIN MENTIONED, AND ON OATH STATED THAT HE WAS AUTHORIZED TO EXECUTE THE SAID INSTRUMENT.

WITNESS MY HAND OFFICIAL SEAL THE DAY AND YEAR FIRST ABOVE WRITTEN.

Amy L. Williams  
NOTARY PUBLIC IN AND FOR THE STATE OF WA RESIDING AT Kent, 98032



## ACCESS NOTES

NO DIRECT VEHICULAR ACCESS FROM SOUTH 320TH STREET TO LOTS 2, 3 AND 4 OR FROM LOTS 2 TO SOUTH 320TH STREET IS ALLOWED. VEHICULAR MOVEMENTS BETWEEN TRACT B AND SOUTH 320TH STREET ARE SUBJECT TO THE FOLLOWING RESTRICTIONS:

- 1. BETWEEN LOTS 2 AND 3 RIGHT IN ONLY
- 2. BETWEEN LOTS 3 AND 4 RIGHT OUT ONLY.
- 3. WEST OF LOTS 4 RIGHT IN, LEFT IN AND RIGHT OUT.

## SPECIAL NOTES

THE AMENDMENT TO THE "EVERGREEN PLAZA BINDING SITE PLAN/PUD" IS PREPARED TO ALTER THE LANGUAGE OF THE UNDERLYING "EVERGREEN PLAZA PUD" AND ELIMINATE THE DRAINAGE TRACT LIMITATION FROM THE FACE OF THE PLAT.

ZONING/COMPREHENSIVE PLAN - CITY CENTER CORE (ZONE =CC-C)

# AMENDMENT TO EVERGREEN PLAZA BINDING SITE PLAN/ PUD

THAT PORTION OF THE SE1/4 OF THE SW 1/4  
OF SECTION 9, TOWNSHIP 21 NORTH, RANGE 4 EAST, W.M.  
CITY OF FEDERAL WAY, WASHINGTON

### APPROVALS

#### CITY OF FEDERAL WAY

Examined and approved this 29<sup>th</sup> day of August, 2003

Ken Miller (for)  
DIRECTOR OF PUBLIC WORKS

Examined and approved this 29<sup>th</sup> day of AUGUST, 2003

My Kim for KATHY M. SCHUG  
DIRECTOR OF COMMUNITY DEVELOPMENT

#### KING COUNTY DEPARTMENT OF ASSESSMENTS

Examined and approved this 3<sup>rd</sup> day of September, 2003

Scott Noble  
ASSESSOR  
Russell Scheidelman  
DEPUTY ASSESSOR

### RECORDING CERTIFICATE

FILED FOR RECORD AT THE REQUEST OF THE FEDERAL WAY CITY COUNCIL THIS 9<sup>th</sup>  
DAY OF Sept A.D. 2003 AT 10 MINUTES PAST 10:00 AM, AND RECORDED  
IN VOLUME 216 OF PLATS, PAGE 36-38, RECORDS OF KING COUNTY.

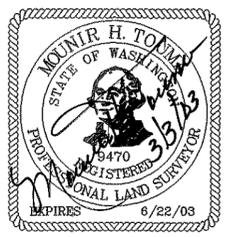
KING COUNTY, WASHINGTON  
DIVISION OF RECORDS AND ELECTIONS

Dean Logan MANAGER      Walt Washington SUPERINTENDENT OF RECORDS

### SURVEYOR'S CERTIFICATE

I HEREBY CERTIFY THAT THIS BINDING SITE PLAN IS BASED UPON AN ACTUAL SURVEY AND  
SUBDIVISION OF SECTION 9, TOWNSHIP 21 NORTH, RANGE 4E, W.M., THAT THE COURSES  
AND DISTANCES ARE SHOWN CORRECTLY THEREON; I HAVE COMPLIED WITH ALL STATE  
COUNTRY AND CITY REGULATIONS GOVERNING PLATTING

Moumir H. Touma  
MOUHIR H. TOUMA PLS.  
PROFESSIONAL LAND SURVEYOR  
CERTIFICATE NO 9470



### LEGAL DESCRIPTION

#### PARCEL A

TRACTS B, C AND LOT 1, EVERGREEN PLAZA, ACCORDING TO THE PLAT THEREOF,  
RECORDED IN VOLUME 100 OF PLATS, PAGE 74, IN KING COUNTY, WASHINGTON;

TOGETHER WITH LOT 2 OF CITY OF FEDERAL WAY BOUNDARY LINE ADJUSTMENT  
NUMBER BLA 00-104493, RECORDED UNDER RECORDING NUMBER 20010215900003;  
EXCEPT THAT PORTION CONVEYED TO THE CITY OF FEDERAL WAY BY DEED RECORDED  
UNDER RECORDING NUMBER 200007211001417.

#### PARCEL B

LOT 1 OF CITY OF FEDERAL WAY BOUNDARY LINE ADJUSTMENT NUMBER BLA  
00-104493, RECORDED UNDER RECORDING NUMBER 2001021500003.

#### PARCEL C

LOT 2, EVERGREEN PLAZA, ACCORDING TO THE PLAT THEREOF, RECORDED IN VOLUME  
100 OF PLATS, PAGE 74, IN KING COUNTY, WASHINGTON;

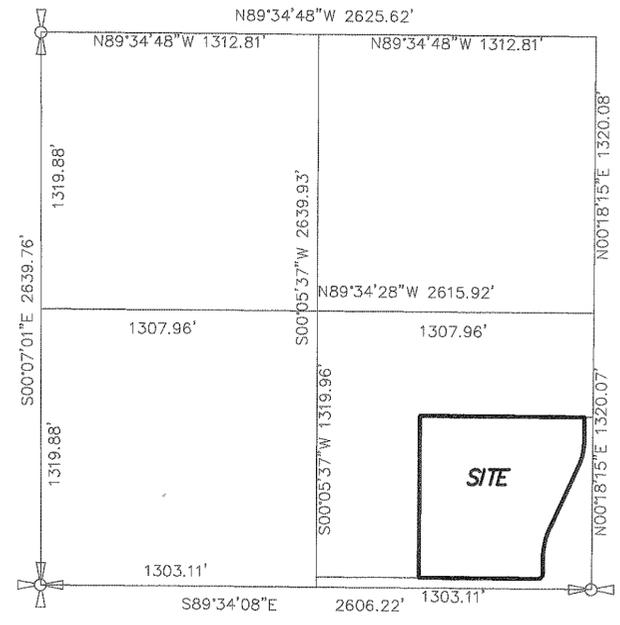
EXCEPT THAT PORTION CONVEYED TO THE CITY OF FEDERAL WAY BY DEED RECORDED  
UNDER RECORDING NUMBER 20000803000870.

#### PARCEL D

LOT 3, EVERGREEN PLAZA, ACCORDING TO THE PLAT THEREOF, RECORDED IN VOLUME  
100 OF PLATS, PAGE 74, IN KING COUNTY, WASHINGTON.

#### PARCEL E

LOT 4, EVERGREEN PLAZA, ACCORDING TO THE PLAT THEREOF, RECORDED IN VOLUME  
100 OF PLATS, PAGE 74, IN KING COUNTY, WASHINGTON.



DEVELOPER:  
DCG II, LLC  
10818 SE KENT-KANGLEY RD, SUITE 104  
KENT, WA. 98031

OWNERS:  
DCG II, LLC  
10818 SE KENT-KANGLEY RD  
SUITE 104  
KENT, WA 98031  
PHONE 253-852-6400

Denny's, Inc.  
3345 Michaelson Drive  
Suite 200  
Irvine, CA 92715

Wendy's International, Inc.  
4288 W. Dublin Granville Road  
Dublin, Ohio 43017

Washington Federal Savings and Loan  
1119 Pacific Avenue, M.S. 0291  
Tacoma, WA 98402

ARG Enterprises, Inc.  
4410 El Camino Real  
Suite 201  
Los Altos, CA 94022

#### SURVEYOR:

TOUMA ENGINEERS/LAND SURVEYORS  
6632 SOUTH 191ST PLACE  
SUITE E102  
KENT, WA 98032  
PHONE 425-251-0665



# AMENDMENT TO EVERGREEN PLAZA BINDING SITE PLAN/ PUD

THAT PORTION OF THE SE1/4 OF THE SW 1/4  
OF SECTION 9, TOWNSHIP 21 NORTH, RANGE 4 EAST, W.M.  
CITY OF FEDERAL WAY, WASHINGTON



GRAPHIC SCALE



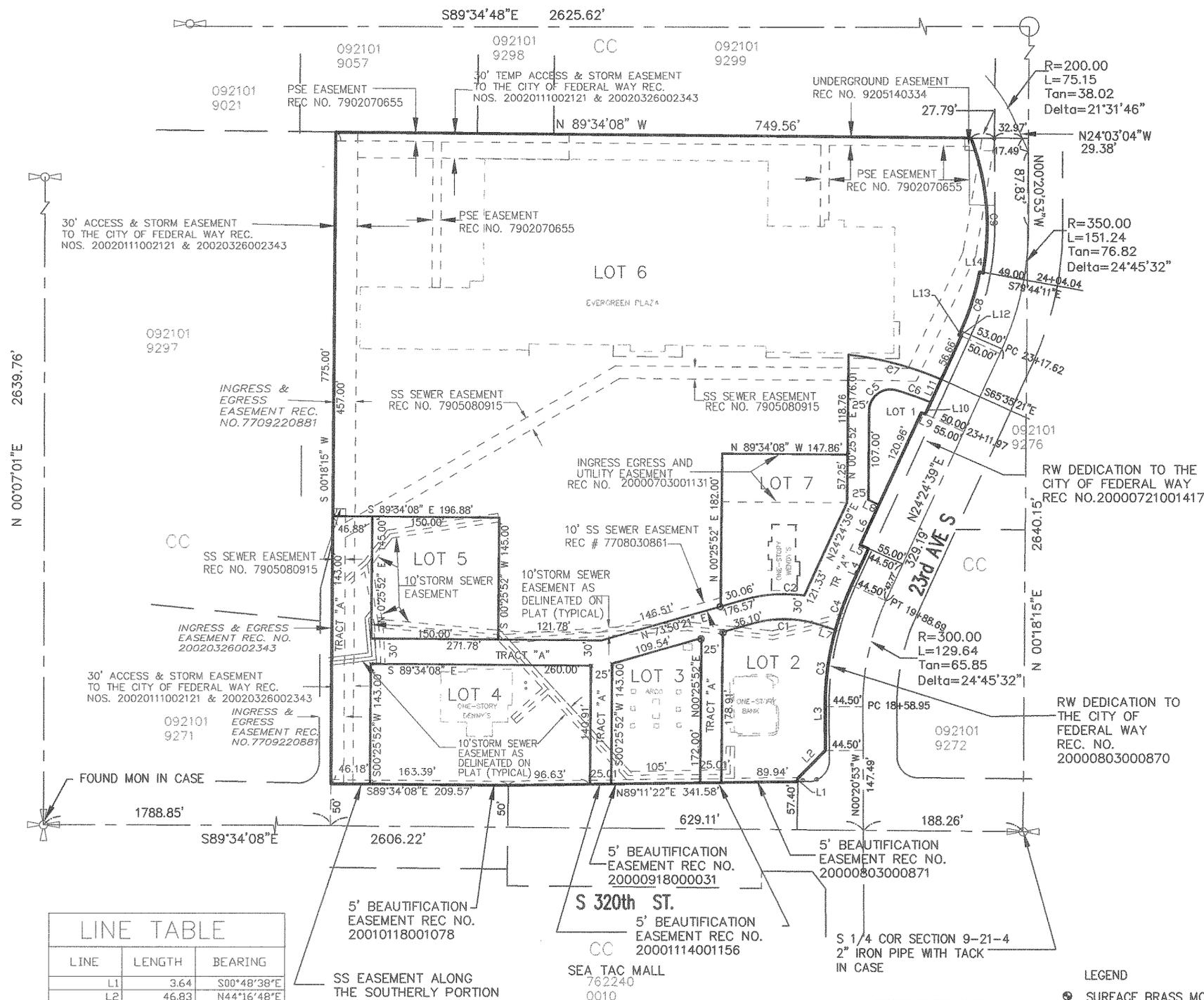
( IN FEET )  
1 inch = 100 ft.

## SURVEY NOTES

INSTRUMENT: NIKON TOTAL STATION DTM-A10LG  
(5 SECOND INSTRUMENT).  
METHOD USED: FIELD TRAVERSE WITH ACTUAL  
FIELD MEASUREMENTS AND ANGLES  
WAC 332-130-090  
DATE OF SURVEY: JUNE 2001  
BASIS OF BEARING: THE PLAT OF EVERGREEN PLAZA VOL. 100,  
PAGE 74, RECORDS OF KING CO.

## NOTES

- ALL COVENANTS, CONDITIONS, RESTRICTIONS, RESERVATIONS, EASEMENT FOR OTHER SERVITUDES, IF ANY, DISCLOSED BY THE RECORDED PLAT OF EVERGREEN PLAZA, AS RECORDED IN VOLUME 100 OF PLATS, PAGE 74, RECORDS OF KING COUNTY, WASHINGTON.
- ALL COVENANTS, CONDITIONS, RESTRICTIONS, RESERVATIONS, EASEMENTS OR OTHER SERVITUDES, IF ANY DISCLOSED BY THE SHORT PLAT RECORDED UNDER RECORDING NO. 7912270667, RECORDS OF KING COUNTY, WASHINGTON.
- ALL COVENANTS, CONDITIONS, RESTRICTIONS, RESERVATIONS, EASEMENTS OR OTHER SERVITUDES, IF ANY DISCLOSED BY THE BOUNDARY LINE ADJUSTMENT RECORDED UNDER RECORDING NO. 20010215900003, RECORDS OF KING COUNTY, WASHINGTON.
- SANITARY SEWER EASEMENT & AGREEMENT AND TERMS AND CONDITIONS RECORDED UNDER RECORDING NO. 7810090769, RECORDS OF KING COUNTY, WASHINGTON.
- DOMESTIC WATER EASEMENT & AGREEMENT AND TERMS AND CONDITIONS RECORDED UNDER RECORDING NO. 7810090768, RECORDS OF KING COUNTY, WASHINGTON.
- WASHINGTON NATURAL GAS COMPANY EASEMENT AND TERMS AND CONDITIONS RECORDED UNDER RECORDING NO. 9411180603. ITS DESCRIPTION IS NOT SUFFICIENT TO DETERMINE ITS EXACT LOCATION.
- COVENANTS, CONDITIONS AND RESTRICTIONS IMPOSED BY INSTRUMENT RECORDED UNDER RECORDING NO. 9510121424, IN KING COUNTY, WASHINGTON.
- COVENANTS, CONDITIONS AND RESTRICTIONS IMPOSED BY INSTRUMENT RECORDED UNDER RECORDING NO. 9808101434, IN KING COUNTY, WASHINGTON.
- TEMPORARY CONSTRUCTION EASEMENT AND THE TERMS AND CONDITIONS IMPOSED BY INSTRUMENT RECORDED UNDER RECORDING NO. 20000721001418.
- PERMANENT BEAUTIFICATION EASEMENT AND THE TERMS AND CONDITIONS IMPOSED BY INSTRUMENT RECORDED UNDER RECORDING NO. 20001117001156.
- EASEMENT AND THE TERMS AND CONDITIONS FOR PUGET POWER UNDERGROUND EASEMENT RECORDED UNDER RECORDING NO. 7912280536. ITS DESCRIPTION IS NOT SUFFICIENT TO DETERMINE ITS EXACT LOCATION.
- PSE EASEMENT RECORDED UNDER RECORDING NO. 7707070686. ITS DESCRIPTION IS NOT SUFFICIENT TO DETERMINE ITS EXACT LOCATION.
- 10' WATER EASEMENT EASEMENT RECORDED UNDER RECORDING NO. 7606170697 ITS DESCRIPTION IS NOT SUFFICIENT TO DETERMINE ITS EXACT LOCATION.
- PSE EASEMENT RECORDED UNDER RECORDING NO. 7912280536, ITS DESCRIPTION IS NOT SUFFICIENT TO DETERMINE ITS EXACT LOCATION.
- WATER EASEMENT RECORDED UNDER RECORDING NO. 8002250543. ITS DESCRIPTION IS NOT SUFFICIENT TO DETERMINE ITS EXACT LOCATION.
- NATURAL GAS EASEMENT RECORDED UNDER RECORDING NO. 9205140334. ITS DESCRIPTION IS NOT SUFFICIENT TO DETERMINE ITS EXACT LOCATION.
- SLOPE EASEMENT AFFECT THE EAST BOUNDARY OF TRACT A, B AND LOT 1 OF THE ORIGINAL PUD RECORDED UNDER RECORDING NO. 7610010118.
- DRIVEWAY EASEMENT OVER LOT 1 RECORDED UNDER RECORDING NO. 2000070300130.
- WATER MAINTENANCE EASEMENT ACROSS LOT 1 OF FWBLA 00-104493 RECORDED UNDER RECORDING NO. 20010302002469.
- SS EASEMENT ALONG THE NORTH 15 FEET OF THE SOUTH 65 FEET OF TRACT A, LOTS 2,3 AND 4 MEASURED AT RIGHT ANGLES AND PARALLEL TO THE CENTERLINE OF SOUTH 320TH STREET RIGHT OF WAY RECORDED UNDER RECORDING NO. 7606170594.
- 10' WATER EASEMENT ALONG THE SOUTH PORTIONS OF LOTS 2, 3 AND 4 RECORDED UNDER RECORDING NO. 7606170697. ITS DESCRIPTION IS NOT SUFFICIENT TO DETERMINE ITS EXACT LOCATION.
- TEMPORARY CONSTRUCTION EASEMENT ALONG THE EAST BOUNDARY OF TRACTS A, LOTS 1 & 6 RECORDED UNDER RECORDING NO. 20000721001418.
- TEMPORARY CONSTRUCTION EASEMENT ALONG THE EAST BOUNDARY OF LOT 2 RECORDED UNDER RECORDING NO. 20000803000872.
- REIMBURSEMENT, TOLLING & STANDSTILL AGREEMENT AFFECTS LOT 4 RECORDED UNDER RECORDING NO. 20000628001265.
- TRACT A OF THE AMENDED EVERGREEN PLAZA IS FOR THE PURPOSE OF VEHICULAR AND PEDESTRIAN TRAFFIC ACCESS WITHIN THE PLAZA.



LINE	LENGTH	BEARING
L1	3.64	S00°48'38"E
L2	46.83	N44°16'48"E
L3	52.06	N00°20'53"W
L4	47.77	S24°24'39"W
L5	10.50	N65°35'21"W
L6	52.55	S24°24'39"W
L7	19.76	N72°04'08"W
L8	13.55	S65°35'21"E
L9	5.00	N65°35'21"W
L10	15.36	S24°24'39"W
L11	30.01	S24°24'39"W
L12	3.00	N65°35'21"W
L13	5.62	S24°24'35"W
L14	4.00	S79°44'11"E

CURVE	LENGTH	RADIUS	DELTA
C1	80.33	135.00	34°05'31"
C2	70.47	165.00	24°28'20"
C3	92.17	344.50	15°19'44"
C4	56.70	344.50	09°25'48"
C5	46.16	25.00	105°46'59"
C6	42.94	370.00	06°38'57"
C7	113.49	400.00	16°15'23"
C8	73.59	297.00	14°11'48"
C9	162.65	301.00	30°57'40"

- LEGEND
- SURFACE BRASS MONUMENT
  - SET 1/2" REBAR
  - ⊗ PK NAIL
  - FOUND REBAR & CAP OR IRON PIPE
  - ⊕ QUARTER CORNER
  - ⊗ SECTION CORNER

BSP LOT NO.	EXISTING LOT NO.	AREA-SF
LOT 1	LOT 1 OF PUD	5,535
LOT 2	LOT 2 OF PUD	22,663
LOT 3	LOT 3 OF PUD	16,533
LOT 4	LOT 4 OF PUD	37,078
LOT 5	TRACT "C" OF PUD	21,750
LOT 6	LOT 2 OF FWBLA 00-104493	341,390
LOT 7	LOT 1 OF FWBLA 00-104493	22,409
TRACT "A"	TRACT "B" OF PUD	51,797

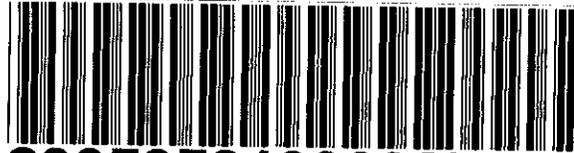


DATE: FEBRUARY 1, 2003  
CITY FILE NO. 02-102953-SU

**TOUMA ENGINEERS & LAND SURVEYORS**  
6632 SOUTH 191ST PLACE, SUITE E-102 • KENT, WA 98032  
PHONE (425) 251-0665 • FAX (425) 251-0625

Return Address:

City of Federal Way  
Attn: Law Dept.  
33325 8<sup>th</sup> Ave S  
PO Box 9718  
Federal Way, WA 98063-9718



**20050524000385**

PUBLIC WD 21.00  
PAGE001 OF 003  
05/24/2005 09:54  
KING COUNTY, WA

**E2125024**

05/24/2005 09:54  
KING COUNTY, WA  
TAX \$2.00  
SALE \$0.00

PAGE001 OF 001

**STATUTORY WARRANTY DEED**

Grantor (s): DCG II LLC  
Grantee (s): CITY OF FEDERAL WAY, a Washington municipal corporation  
Property Legal Description (abbreviated): West 30 feet of Lot 2 of King County Short Plat 1079107, together with approximately the West 46.88 feet of Tract B of the Plat of Evergreen Plaza as recorded in Volume 100 of Plats, pages 74-75.  
Additional Legal(s) on Exhibit A  
Assessor's Tax Parcel ID#(s): 2423200050 and 2423200060

THE GRANTOR, DCG II LLC a Washington Limited Liability Corporation for and in consideration of One Dollar (\$1.00) and other good and valuable consideration, receipt of which is hereby acknowledged, and under threat of the exercise of eminent domain, conveys and warrants to the CITY OF FEDERAL WAY, a Washington municipal corporation, the real property described in Exhibit "A" herewith attached and made a part hereof, and any after-acquired interest therein, situated in King County in the State of Washington.

DATED THIS 2<sup>ND</sup> day of MAY, 2005.

**GRANTOR**

DCG II LLC

By: D. Michael Dunne  
(signature)

D. MICHAEL DUNNE  
(typed/printed name)

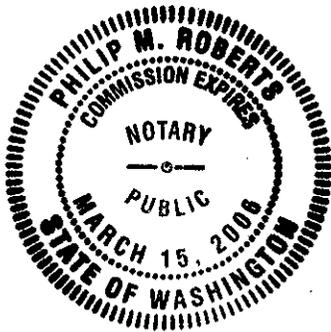
MANAGING PARTNER  
(title)

STATE OF WASHINGTON )  
 ) ss.  
COUNTY OF KING )

On this day personally appeared before me D. MICHAEL DUNNE, to me known to be the Manager of DCG II, LLC, the Washington limited liability company that executed the within and foregoing instrument, and acknowledged the said instrument to be the free and voluntary act and deed of such limited liability company for the uses and purposes therein mentioned, and on oath stated that she/he was authorized to execute said instrument.

WITNESS my hand and official seal hereto affixed this 2<sup>nd</sup> day of May, 2005.

Philip M. Roberts  
Philip M. Roberts  
NOTARY PUBLIC in and for the State of  
Washington.  
My Appointment Expires March 15, 2006.



## TRACT X

THAT PORTION OF TRACT B OF THE PLAT OF EVERGREEN PLAZA AS RECORDED IN VOLUME 100 OF PLATS AT PAGE 74 AND 75, RECORDS OF KING COUNTY, WASHINGTON, DESCRIBED AS FOLLOWS

BEGINNING AT THE SOUTHWEST CORNER OF SAID TRACT B, SAID CORNER ALSO BEING THE SOUTHWEST CORNER OF SAID PLAT, THENCE NORTH  $00^{\circ}18'15''$  EAST ALONG THE WEST LINE OF SAID TRACT B, 318.00 FEET TO THE NORTHWEST CORNER OF SAID TRACT B, THENCE SOUTH  $89^{\circ}34'08''$  EAST ALONG THE NORTH LINE OF SAID TRACT B, 46.88 FEET TO THE NORTHEAST CORNER OF SAID TRACT B, THENCE SOUTH  $00^{\circ}25'52''$  WEST, 318.00 TO THE SOUTH LINE OF SAID TRACT B, THENCE NORTH  $89^{\circ}34'08''$  WEST ALONG SAID SOUTH LINE, 46.18 FEET TO THE POINT OF BEGINNING

TOGETHER WITH THE WEST 30 FEET OF LOT 2 OF KING COUNTY SHORT PLAT 1079107 AS RECORDED UNDER RECORDING NUMBER 7912270667, RECORDS OF KING COUNTY, WASHINGTON CONTAINING 28,506 SQUARE FEET



7-28-98

EVERGREEN PLAZA  
Tony Barash, Trustee

E A S E M E N T

THIS AGREEMENT made this 10th day of June, 19 76,  
by and between the LAKEHAVEN SEWER DISTRICT, a municipal corporation of King  
County, Washington, hereinafter termed "Grantee", and ANTHONY H. BARASH, TRUSTEE  
for EVERGREEN FEDERAL WAY TRUST  
hereinafter termed "Grantor".

7606170594

WITNESSETH:

That the said Grantor for valuable consideration does by these presents  
grant unto the Grantee a perpetual right-of-way or easement for sewer mains  
with the necessary appurtenances through, over, and across the following  
property, described as follows:

That portion of the North 15 feet of the South 65 feet of the East  
817.35 feet of the Southeast quarter of the Southwest quarter of  
Section 9, Township 21 North, Range 4 East, W.M. in King County,  
Washington lying Northerly of the following described line.

Beginning at a point on the East line of said Southeast quarter  
of the Southwest quarter which is North 0°18'15" East along said  
East line 63.17 feet from the Southeast corner thereof; Thence  
South 89°11'22" West 607.89 feet to a point on the North line of  
the South 50 feet of said subdivision; Thence North 89°34'08"  
West along said North line 209.57 feet to the West line of the  
East 817.35 feet of said subdivision and the terminus of said  
described line.

LESS that portion lying Easterly of the Westerly margin of the  
F. R. Line right-of-way as shown on State Highway Map thereof,  
"SR 5 Pierce County line to Junction S.S.H. 5-A King County"  
Sheet 8 of 10.

1% EXCISE TAX NOT REQUIRED  
King Co. Records Division

By [Signature], Deputy

Easement No. 443-332



JUN-17-76 L 00240 7606170594 -- E RF 3.00

JUN 17 1 20 PM '76

RECORDED NO RECORDS

Filed at the Request of:

LAKEHAVEN SEWER DISTRICT  
P. O. BOX 3046  
FEDERAL WAY, WASH. 98002  
3

SEP-3-76 10 03 09 7609030662 - D HF 0.00

6-8-76  
jb

Introduced by: DAVE MOONEY  
76-509

ORDINANCE NO. 2813

AN ORDINANCE relating to the Vacation of a Portion of South 320th Street. Petitioner: Evergreen Federal Way Trust.....V-1515 30

STATEMENT OF FACTS

1. A petition has been filed requesting vacation of a portion of South 320th Street, hereinafter described.
2. The report of the Department of Public Works and Transportation, Building and Land Development, Real Property Division and Traffic and Planning Division, finds that the portion to be vacated is useless to the County and the vacation would not be in conflict with the principles and purposes of the comprehensive plan and the specific plans in the vicinity of the proposed vacation.
3. The portion petitioned for vacation was obtained by the State of Washington, Department of Highways by condemnation (Court Cause No. 535008). We have contacted the several utilities serving the area. Easements have been prepared by Water District No. 124, Puget Sound Power and Light Company and Lake Haven Sewer District, and have been forwarded to the trustee in California for signature. We have been assured by the petitioner's attorney, William D. Stites of the firm of Ferguson & Burdel, that the easements will be executed and promptly returned to the local utilities.
4. The subject vacation is a condition of approval required by the King County Council for the Evergreen Plaza Planned Unit Development (File No. 239-75-P).

Due notice was given in the manner provided by law and a hearing was held by the King County Council on the 26th day of July, 1976.

In consideration of the benefits to be derived from the subject vacation, the Council has determined that it is in the best interest of the citizens of King County to grant said petition,

BE IT ORDAINED BY THE COUNCIL OF THE COUNTY OF KING:

SECTION 1. The Council on the 26th day of July, 1976, hereby vacates and abandons a portion of South 320th Street, described as follows:

FILED for Record at Request of  
Room 211  
Address .....

7609030662

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All that portion of So. 320th Street (P.S.H. No. 5) as condemned by Superior Court in Cause No. 535008, Records of King County, Washington, lying within the East 817.35 ft. of the S.E. 1/4 of the S.W. 1/4 of Section 9, Township 21 North, Range 4 East, W.M., in said County, and Nly of the following described line:

BEGINNING at a point on the East line of said subdivision which is North 0°18'15" East along said East line, 63.17 ft. from the S.E. corner thereof; Thence South 89°11'22" West 607.89 ft. to a point on the North line of the South 50 feet of said subdivision; Thence North 89°34'08" West along said North line 209.57 feet to the West line of the East 817.35 feet of said subdivision and the terminus of said described line, LESS that portion lying within the FR line Right-of-Way, as shown on state highway map thereof, "SR 5, Pierce County line to Junction SSH No. 5-A, King County" Sheet 8 of 10, ALSO reserving therein an easement for those utilities now located within that portion to be vacated, said parcel containing 17,665 Square Feet.

INTRODUCED AND READ for the first time this 14th day of June, 1976.

PASSED on this 26th day of July, 1976.

KING COUNTY COUNCIL  
KING COUNTY, WASHINGTON

[Signature]  
Chairman

ATTEST:

[Signature]  
Clerk of the Council

APPROVED this 28th day of July, 1976.

[Signature]  
JOHN D. SPELLMAN, King County Executive

7609030662

SEP 3 3 26 PM '76

RECORDED KC RECORDS

FILED for Record at Request of

Name \_\_\_\_\_

Address \_\_\_\_\_

*BG*

EASEMENT FOR  
HIGHWAY SLOPES

304102 L7

FA No. 1-5-3(439)142

In the Matter of SR 5, Pierce County Line to Jct. SSH No. 5-A

KNOW ALL MEN BY THESE PRESENTS, that the grantor

ANTHONY H. BARASH, Trustee for Evergreen - Federal Way Trust

for and in consideration of MUTUAL BENEFITS

grants and conveys unto the STATE OF WASHINGTON and its assigns, an easement over, under, upon and across the hereinafter described lands for the purpose of constructing and maintaining highway slopes in excavation and/or embankment,

7610010118

Said lands being situated in King County, State of Washington, and described as follows:

That portion of the following described Parcel "A" lying between the hereinafter described Lines 1 and 2:

Line 1: A line drawn 40 feet Westerly from and parallel with the FR Line centerline survey of SR 5, Pierce County Line to Jct. SSH No. 5-A.

Line 2: Beginning at a point 40 feet Westerly and opposite Highway Engineer's Station (hereinafter referred to as H.E.S.) FR 12+30 on the FR Line centerline survey of said highway project; thence Northwesterly in a straight line to a point 55 feet Westerly and opposite H.E.S. FR 12+77.13; thence Northeasterly parallel with said centerline to a point opposite H.E.S. FR 16+06.31 P.C.; thence Northeasterly in a straight line to a point 40 feet Westerly and opposite H.E.S. 16+50; thence Northerly parallel with said centerline to a point opposite H.E.S. 17+00; thence Northwesterly in a straight line to a point 60 feet Westerly and opposite H.E.S. FR 17+57.56 P.T.; thence Northerly parallel with said centerline to a point opposite H.E.S. FR 20+26.60 P.T. and the end of this line description.

PARCEL "A"

The South 825 feet of the East half of the East half of the Southeast quarter of the Southwest quarter of Section 9, Township 21 North, Range 4 East, W.M., in King County, Washington; EXCEPT that portion heretofore conveyed to the State of Washington by deed recorded under King County Recording No. 2727417 for State Road No. 5; AND EXCEPT that portion condemned by the State of Washington in King County Superior Court Cause No. 535008 for Primary State Highway No. 1.

The lands included in said easement contain an area of 0.19 acre, more or less, the specific details concerning all of which are to be found within that certain map of definite location now of record and on file in the office of the Director of Highways at Olympia, and bearing date of approval June 24, 1958, and revised March 19, 1976.

It being understood and agreed that in the event that the grantor, his heirs, or assigns, shall excavate and/or place an embankment upon the area covered by this slope easement to the level of the grade of the above-mentioned highway abutting thereon, all rights of the grantee herein shall cease and terminate.

304102 L7

THIS IS AN INSTRUMENT OF THE  
STATE OF WASHINGTON  
RECORDED AT THE REG. OFF. OF  
DEPARTMENT OF HIGHWAYS  
NO RECORDING FEE OR EXCISE TAX  
IS TO BE CHARGED ON INSTRUMENTS  
TO THE STATE OF WASHINGTON

It is understood and agreed that the delivery of this Easement is hereby tendered and that the terms and obligations hereof shall not become binding upon the State of Washington unless and until accepted and approved hereon in writing for the State of Washington, Department of Highways by its Director or his duly authorized representative

7610010118

Accepted and Approved:

Date 9/22/76  
STATE OF WASHINGTON  
Department of Highways  
By: [Signature]  
Title:

Dated this 17th day of May 1976  
Anthony H. Barash, as Trustee for  
Evergreen - Federal Way Trust  
By: [Signature] Trustee

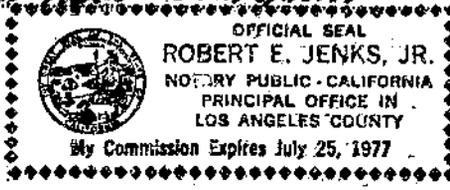
(INDIVIDUAL ACKNOWLEDGEMENT FORM)

STATE OF CALIFORNIA  
County of LOS ANGELES } ss.

On this 17th day of MAY, 1976 before me personally appeared ANTHONY H. BARASH  
Trustee to me known to be the individual described in and who executed the foregoing instrument; and acknowledged that HE signed and sealed the same as MS free and voluntary act and deed; for the uses and purposes therein mentioned.  
Given under my hand and official seal the day and year last above written.

[Signature]  
Notary Public in and for the State of CALIFORNIA  
Residing at 1840 LORNE ST  
CANSA PARK CALIFORNIA

My Commission Expires July 25, 1977



(CORPORATION ACKNOWLEDGEMENT FORM)

STATE OF \_\_\_\_\_  
County of \_\_\_\_\_ } ss.

On this \_\_\_\_\_ day of \_\_\_\_\_ before me personally appeared \_\_\_\_\_  
to me known to be the \_\_\_\_\_ of the corporation that executed the foregoing instrument, and acknowledged said instrument to be the free and voluntary act and deed of said corporation, for the uses and purposes therein mentioned, and on oath stated that authorized to execute said instrument and that the seal affixed is the corporate seal of said corporation.  
Given under my hand and official seal the day and year last above written.

Notary Public in and for the State of \_\_\_\_\_  
Residing at \_\_\_\_\_ 1976 \_\_\_\_\_ PM 8 30

HWY FORM 202-102A  
REVISED 7/74

[Signature]  
EASEMENT FOR  
HIGHWAY SLOPES  
FROM  
ANTHONY H. BARASH  
TO  
STATE OF WASHINGTON  
IN  
King  
County

RETURN TO:  
L. FERGUSON  
610 SAFERD TITLE INS CO  
SEATTLE  
RIGHT OF WAY UNIT

DIRECTOR  
RECORDS & ELECTIONS  
KING COUNTY, WASH.

SR. 5, Pierce County Line  
Jct. SSH No. 5-A  
Parcel No. 1-10783  
NC

This easement is being rerecorded to correct the legal description. EASEMENT



For and in consideration of One Dollar (\$1.00) and other valuable consideration, the receipt of which is hereby acknowledged,

ANTHONY H. BARASH, trustee for Evergreen-Federal Way Trust,

("Grantor" herein), hereby grants, conveys and warrants to PUGET SOUND POWER & LIGHT COMPANY, a Washington corporation ("Grantee" herein), for the purposes hereinafter set forth, a perpetual easement over, across and under the following described real property (the "Property" herein) in King County, Washington:

Any interest of record or after acquired interest in that portion of South 320th lying adjacent to the following described property:

The east 817.35 feet of the Southwest 1/4 of Section 9, Township 21 North, Range 4 East, W.M., Except the south 90 feet thereof.

Except as may be otherwise set forth herein Grantee's rights shall be exercised upon that portion of the Property (the "Right-of-Way" herein) described as follows:

A Right-of-Way ten (10) feet in width having five (5) feet of such width on each side of a centerline described as follows:

The centerline of Grantee's facilities as constructed under, over and upon the above described right of way.

1% EXCISE TAX NOT REQUIRED King/Co. Records Division

By [Signature], Deputy

1. Purpose. Grantee shall have the right to construct, operate, maintain, repair, replace and enlarge one or more electric transmission and/or distribution lines over and/or under the Right-of-Way together with all necessary or convenient appurtenances thereto, which may include but are not limited to the following:

a. Overhead facilities. Poles and/or towers with crossarms, braces, guys and anchors; electric transmission and distribution lines; communication and signal lines; transformers.

b. Underground facilities. Underground conduits, cables, vaults, manholes, switches and transformers; semi-buried or ground mounted facilities such as pads, transformers and switches.

Following the initial construction of its facilities, Grantee may from time to time construct such additional lines and other facilities as it may require.

2. Access. Grantee shall have the right of access to the Right-of-Way over and across the Property to enable Grantee to exercise its rights hereunder, provided, that Grantee shall compensate Grantor for any damage to the Property caused by the exercise of said right of access.

3. Cutting of Trees. Grantee shall have the right to cut or trim any and all brush or trees standing or growing upon the Right-of-Way, and also the right to cut or trim any trees upon the Property which, in falling, could, in Grantee's reasonable judgment, be a hazard to Grantee's facilities.

4. Grantor's Use of Right-of-Way. Grantor reserves the right to use the Right-of-Way for any purpose not inconsistent with the rights herein granted, provided, that Grantor shall not construct or maintain any building or other structure on the Right-of-Way and Grantor shall do no blasting within 300 feet of Grantee's facilities without Grantee's prior written consent.

5. Indemnity. By accepting and recording this easement, Grantee agrees to indemnify and hold harmless Grantor from any and all claims for damages suffered by any person which may be caused by Grantee's exercise of the rights herein granted, provided, that Grantee shall not be responsible to Grantor for any damages resulting from injuries to any person caused by acts or omissions of Grantor.

6. Abandonment. The rights herein granted shall continue until such time as Grantee ceases to use the Right-of-Way for a period of five (5) successive years, in which event this easement shall terminate and all rights hereunder shall revert to Grantor, provided, that no abandonment shall be deemed to have occurred by reason of Grantee's failure to initially install its facilities on the Right-of-Way within any period of time from the date hereof.

To Be Notarized

7607090505  
TE, NS 21N - 26E

7704180627

KH - [Signature]  
31

7. Successors and Assigns. The rights and obligations of the parties shall inure to the benefit of and be binding upon their respective successors and assigns.

DATED this 15<sup>th</sup> day of June, 1976.

GRANTOR EVERGREEN FEDERAL WAY TRUST  
Anthony H. Barash, Trustee

7607090505  
7704180627

STATE OF CALIFORNIA }  
COUNTY OF LOS ANGELES } SS

On this day personally appeared before me \_\_\_\_\_  
to me known to be the individual described in and who executed the within and foregoing instrument, and  
acknowledged that \_\_\_\_\_ signed the same as \_\_\_\_\_ free and voluntary act and deed for the uses  
and purposes therein mentioned.

GIVEN under my hand and official seal this \_\_\_\_\_ day of \_\_\_\_\_, 19\_\_\_\_.

Notary Public in and for the State of California

STATE OF CALIFORNIA }  
COUNTY OF LOS ANGELES } SS

On this 15<sup>th</sup> day of June, 1976, before me, the undersigned, personally  
appeared Anthony H. Barash

to me known to be the Trustee, respectively, of Evergreen

Federal Way Trust the trust that executed  
the foregoing instrument, and acknowledged the said instrument to be the free and voluntary act and deed of  
said trust for the uses and purposes therein mentioned, and on oath stated that he  
authorized to execute the said instrument.

Witness my hand and official seal hereto affixed the day and year first above written.



Betsy M. Sutton  
Notary Public in and for the State of California.

JUL-9-76 0003 7607090505 LSI A RF 3.00

APR-18-77 00152 7704180627 LSI E RF 3.00

FILED FOR RECORD AT REQUEST OF:  
PUGET POWER  
REAL ESTATE DIVISION  
P. O. BOX 868  
BELLEVUE, WASHINGTON 98009  
ATTENTION: ERIS L. BAKER  
~~ATTENTION: HOWARD A. STRONG~~

APR 19 11 00 AM '77  
RECORDED KC RECORDS

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JUL 9 10 02 AM '76  
RECORDED KC RECORDS

E A S E M E N T

THIS AGREEMENT made this 30 day of June, 1977,  
by and between the LAKEHAVEN SEWER DISTRICT, a municipal corporation of King  
County, Washington, hereinafter termed "Grantee", and B J K Joint Venture  
hereinafter termed "Grantor".

WITNESSETH:

That the said Grantor for valuable consideration does by these presents  
grant unto the Grantee a perpetual right-of-way or easement for sewer mains  
with the necessary appurtenances through, over, and across the following  
property, described as follows:

THE SOUTHERLY 10' OF TRACT 'A' OF THE PLAT OF EVERGREEN ESTATES SOUTH, AS  
RECORDED IN VOLUME 100 OF PLATS, PAGES 75-77, RECORDS OF KING COUNTY, WASHINGTON.

7708300861

3.00

AUG-30-77 L 00304 7708300861 -- A RF

AUG 30 1 57 PM '77

RECORDED KC RECORDS

Easement No. 547-427

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7709220881

RECIPROCAL NON-EXCLUSIVE EASEMENT

This Reciprocal Non-Exclusive Easement (hereinafter referred to as the "Easement") made and entered into this 31st day of January, 1977, by and between ANTHONY H. BARASH, Trustee for Evergreen-Federal Way Trust (hereinafter referred to as the "Trustee") and ANDREW C. CRATSENBERG and LUETTA M. CRATSENBERG, husband and wife (hereinafter referred to as "Cratsenberg");

WHEREAS, the Trustee is the owner in fee of certain real property located in King County, Washington, including the portion thereof described in the legal description thereof attached hereto and hereby made a part hereof as "Exhibit A;" and

WHEREAS, Cratsenberg is the owner in fee of certain real property located in King County, Washington, including the portion thereof described in the legal description attached hereto and hereby made a part hereof as "Exhibit B;"

NOW, THEREFORE, for and in consideration of the mutual promises, covenants, conditions and benefits contained in and derived hereunder and for other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, the Trustee, for and on behalf of himself and the beneficiaries of the Evergreen-Federal Way Trust and their respective heirs, administrators, executors, successors-in-interest and assigns, does hereby grant and convey unto Cratsenberg, and their heirs, administrators,

1% EXCISE TAX NOT REQUIRED  
King Co. Records Division

By J. Tompkins, Deputy

7709220881

executors, successors-in-interest and assigns, a non-exclusive perpetual easement and right-of-way of access, ingress and egress over and across that certain real property located in King County, Washington, as described in the legal description thereof attached hereto and hereby made a part hereof as "Exhibit A"; and Cratsenberg, for and on behalf of themselves and their heirs, administrators, executors, successors-in-interest, assigns and marital community, do hereby grant and convey unto the Trustee and the beneficiaries of the Evergreen-Federal Way Trust and the owner or owners of any lot, parcel or tract within that certain area known as the Evergreen Plaza plat and their respective executors, administrators, successors-in-interest, assigns and marital communities, if any, a non-exclusive perpetual easement and right-of-way of access, ingress and egress over and across that certain property located in King County, Washington, as described in the legal description thereof attached hereto and hereby made a part hereof as "Exhibit B." The real property described in Exhibits A and B shall hereinafter be referred to as the "Easement Property."

TO HAVE AND TO HOLD said Easement Property unto each respective party, their heirs, administrators, executors, successors, assigns and marital communities, if any, forever. Said Easement Property shall be appurtenant to that certain real property located in King County, Washington, which is the subject matter of the Evergreen Plaza plat, and Cratsenberg's real property adjacent thereto as described in the legal description thereof attached hereto and hereby made

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a part hereof as "Exhibit C", together with any and all other real property which may be hereinafter acquired by the parties, or any of them, contiguous to the property described in Exhibit A and/or Exhibit B.

This Easement is granted upon the following terms and conditions:

1. Entry Upon Property. Either Cratsenberg or the Trustee, or their authorized agents, employees or contractors acting for or on their behalf, may enter from time to time upon any part of the Easement Property for the purpose of locating, relocating, establishing, grading, surfacing, resurfacing, and maintaining all or any portion of the ingress-egress improvements now existing, or hereafter constructed, upon said Easement Property as is reasonably required to render the same suitable for vehicular traffic and to locate, install, maintain, improve, repair, or replace any drains, curbs, lighting, shrubs, trees, traffic direction signs and markings, service pipes, lines or connections which may serve that party's property to which this Easement is appurtenant; provided, that such entry and any work undertaken with respect to the Easement Property after the ingress-egress improvements on said Easement Property are first constructed, shall not unreasonably interfere with the easement rights granted hereunder. The parties shall maintain the Easement Property in good and safe condition as provided in Section 6 below.

2. Obstruction. The parties covenant that they will not, individually or jointly, without the unanimous

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consent of the parties hereto, erect any fence, sign or structure upon the Easement Property, nor obstruct or interfere with the reasonable use of the Easement rights herein granted.

3. Eminent Domain. If the Easement Property, or any part thereof, is taken by any governmental agency in the exercise of its power of eminent domain, the award granted under such proceedings, or any settlement in lieu thereof, for the taking of such property shall be wholly payable to the fee owner of the portion of the Easement Property so taken and any award for the taking of any of any of the rights hereunder granted to a party who is not the fee owner of the property so taken shall be wholly payable to the party to whom said portion of the award is granted. If less than all of the Easement Property is taken, this Easement shall continue in full force and effect with respect to the portion of the Easement Property not taken unless this Easement is terminated by the unanimous consent of the parties hereto. If all of the Easement Property is taken, this Easement shall terminate and the rights and obligations hereunder of the parties hereto, one to the other, shall automatically cease and terminate when possession is transferred to the condemning agency.

4. Use. The parties hereto acknowledge and agree that this Easement is to be used by the parties hereto, and by any owner of a lot, parcel or tract within that real property situated in King County, Washington and covered by the Evergreen Plaza Plat, and by any owner of the real

7709220881

property described in Exhibit C, and their respective heirs, successors, assigns, lessees, sub-lessees, tenants, sub-tenants, business invitees, employees and agents, and that the rights of access to and from the real property which is appurtenant to the Easement Property and ingress and egress thereto and therefrom shall be free and unrestricted. As used herein, the word "access" shall mean and include the right of ingress and egress by vehicle by the parties hereto, and by any owner of a lot or tract within that portion of King County, Washington covered by the Evergreen Plaza Plat and by any owner of all or any portion of the real property described in Exhibit C, and/or their respective heirs, successors, assigns, lessees, sub-lessees, tenants, sub-tenants, business invitees, employees and agents.

Anything herein to the contrary notwithstanding, no rights to the general public are granted under this Easement.

5. Maintenance of Easement Property. Each party shall, at its sole cost and expense, maintain the Easement Property and the improvements thereon located on their fee-owned real property, in a reasonably good and safe condition.

6. Easement Runs With The Land. The Easement granted hereunder shall run with the land included within the Evergreen Plaza Plat and the land described in Exhibit C hereto, and shall bind and be obligatory upon the parties hereto and their respective successors and assigns, and the respective heirs, executors, administrators and marital communities, if any.

7709220881

7. Recording of Easement. The parties hereto agree that this Easement may be placed of public record by any party hereto.

8. Superior to Mortgages and Deeds of Trust. It is agreed that this Easement shall be superior to all mortgages and/or deeds of trust now existing or hereafter recorded against the Easement Property.

IN WITNESS WHEREOF, the parties hereto have executed this Easement the day and year first above written on behalf of themselves, their respective heirs, executors, administrators, successors, assigns and marital communities, if any.

ANTHONY H. BARASH, Trustee for  
Evergreen-Federal Way Trust

*Anthony H. Barash, Trustee*  
Trustee

*Andrew C. Cratsenberg*  
ANDREW C. CRATSENBERG

*Lubetta M. Cratsenberg*  
LUBETTA M. CRATSENBERG, his wife

7709220881

CONSENT

The undersigned PACIFIC NATIONAL BANK OF WASHINGTON (the "Bank"), the beneficiary under that certain Deed of Trust dated \_\_\_\_\_, 1976, between Trustee (as Grantor) and the Bank (as beneficiary) and recorded in the records of King County under Recording No. \_\_\_\_\_, does hereby consent to the foregoing Easement and agrees that the lien of said Deed of Trust shall be junior and subordinate to the said Easement.

PACIFIC NATIONAL BANK OF WASHINGTON  
By \_\_\_\_\_  
Vice-President

CONSENT

The undersigned PRUDENTIAL MUTUAL SAVINGS BANK (the "BANK"), the beneficiary under that certain Deed of Trust dated September 13, 1976, between Cratsenberg (as Grantor) and the bank (as Beneficiary) and recorded in the records of King County under Recording No. 7609140482 does hereby consent to the foregoing Easement and agrees that the lien of said Deed of Trust shall be junior and subordinate to the said Easement.

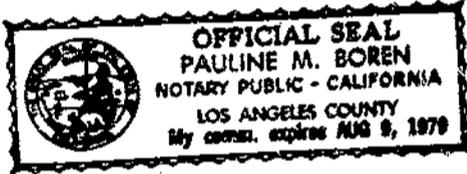
PRUDENTIAL MUTUAL SAVINGS BANK  
By [Signature]  
President

7709220881

STATE OF California )  
COUNTY OF Los Angeles ) SS:

On this day personally appeared before me ANTHONY H. BARASH, Trustee for Evergreen-Federal Way Trust, to me known to be the individual described in and who executed the within and foregoing instrument, and acknowledged that he signed the same as his free and voluntary act and deed as such Trustee, for the uses and purposes therein mentioned.

GIVEN under my hand and official seal this 18<sup>th</sup> day of July, 1977.



Pauline Boren  
Notary Public in and for the State of California, residing at Los Angeles.

STATE OF WASHINGTON )  
COUNTY OF K I N G ) SS:

On this day personally appeared before me ANDREW C. CRATSENBERG and LUETTA M. CRATSENBERG, his wife, to me known to be the individuals described in and who executed the within and foregoing instrument, and acknowledged that they signed the same as their free and voluntary act and deed, for the uses and purposes therein mentioned.

GIVEN under my hand and official seal this 31<sup>st</sup> day of January, 1977.

Jessie D. Snell  
Notary Public in and for the State of Washington, residing at Seattle.





7709220881

EXHIBITS

- A - Naredel's owned easement area.
- B - Cratsenberg's owned easement area.
- C - Cratsenberg's entire area.

7709220881

BEGINNING AT THE INTERSECTION OF THE NORTH LINE OF THE SOUTH 50 FEET OF THE SOUTHEAST QUARTER OF THE SOUTHWEST QUARTER OF SECTION 9, TOWNSHIP 21 NORTH, RANGE 4 EAST, W.M., IN KING COUNTY, WASHINGTON, WITH THE WEST LINE OF THE EAST 817.35 FEET THEROF; THENCE NORTH 0°18'15" EAST 515.00 FEET; THENCE SOUTH 89°34'08" EAST 26.00 FEET; THENCE SOUTH 0°18'15" WEST 490.00 FEET; THENCE ON A CURVE TO THE LEFT, HAVING A RADIUS OF 25.00 FEET, TO THE NORTH LINE OF THE SOUTH 50.00 FEET OF SAID SUBDIVISION; THENCE NORTH 89°34'08" WEST ALONG SAID NORTH LINE, TO BEGINNING.

EXHIBIT A

Original of this document was submitted for filing

7709220881

BEGINNING AT THE INTERSECTION OF THE NORTH LINE OF THE SOUTH 50 FEET OF THE SOUTHEAST QUARTER OF THE SOUTHWEST QUARTER OF SECTION 9, TOWNSHIP 21 NORTH, RANGE 4 EAST, W.M., IN KING COUNTY, WASHINGTON, WITH THE WEST LINE OF THE EAST 817.35 FEET THEREOF; THENCE NORTH 0°18'15" EAST ALONG SAID WEST LINE, 290.00 FEET; THENCE SOUTHWESTERLY 60.00 FEET TO A POINT ON A LINE PARALLEL WITH AND 14.00 FEET WESTERLY OF SAID WEST LINE; THENCE SOUTH 0°18'15" WEST ALONG SAID PARALLEL LINE 200.00 FEET, MORE OR LESS, TO THE NORTH LINE OF THE SOUTH 75.00 FEET OF SAID SUBDIVISION; THENCE ON A CURVE TO THE RIGHT, HAVING A RADIUS OF 25.00 FEET, TO THE NORTH LINE OF THE SOUTH 50.00 FEET OF SAID SUBDIVISION; THENCE SOUTH 89°34'08" EAST, ALONG SAID NORTH LINE, TO BEGINNING.

EXHIBIT B

PARCEL C: THAT PORTION OF SOUTH 825 FEET OF THE SOUTHEAST QUARTER OF THE SOUTHWEST QUARTER OF SECTION 9, TOWNSHIP 21 NORTH, RANGE 4 EAST, W.M., IN KING COUNTY, WASHINGTON, DESCRIBED AS FOLLOWS:

BEGINNING AT A POINT ON THE SOUTH LINE OF SAID SUBDIVISION DISTANT NORTH  $89^{\circ}34'08''$  WEST 817.35 FEET FROM THE SOUTHEAST CORNER THEREOF; THENCE NORTH  $89^{\circ}34'08''$  WEST 486.0 FEET, MORE OR LESS, TO THE SOUTHWEST CORNER OF SAID SUBDIVISION; THENCE NORTH  $0^{\circ}05'38''$  EAST ALONG THE WEST LINE OF SAID SUBDIVISION 825.01 FEET TO THE NORTH LINE OF THE SOUTH 825 FEET OF SAID SUBDIVISION; THENCE SOUTH  $89^{\circ}34'08''$  EAST 488.80 FEET TO A POINT WHICH BEARS NORTH  $0^{\circ}18'15''$  EAST FROM THE POINT OF BEGINNING; THENCE SOUTH  $0^{\circ}08'15''$  WEST 825 FEET TO THE POINT OF BEGINNING; EXCEPT THAT PORTION

THEREOF TAKEN FOR SOUTH 320TH STREET BY DEEDS RECORDED UNDER AUDITOR'S FILE NO. 2727418 AND 4998538

7709220881

EXHIBIT C

SEP-22-77 00369 7709220881 - E RF 15.00

SEP 22 2 50 PM '77

RECORDED KC RECORDS

FILED for Record at Request of

Name Ferguson & Bussell

Address 1700 Peoples Bank  
4th and Union



EASEMENT FOR UNDERGROUND ELECTRIC SYSTEM

SEA-TAC PLAZA, a Washington Limited Partnership,

THE BANK OF CALIFORNIA, A NATIONAL BANKING ASSOCIATION

("Grantor" herein), grants, conveys and warrants to PUGET SOUND POWER & LIGHT COMPANY, a Washington corporation ("Grantee" herein), for the purposes hereinafter set forth a perpetual easement under, across and over the following described real property (the "Property" herein) King County, Washington.

7902070655

Tract A of Evergreen Plaza, as per plat recorded in Volume 100 of Plats, page 74, records of King County, Washington.

Section 9, Township 21 Range 4 E. W.M.

Except as may be otherwise set forth herein Grantee's rights shall be exercised upon that portion of the Property (the "Right-of-Way" herein) described as follows:

A Right-of-Way -----feet in width having -----feet of such width on each side of a center-line described as follows:

Parcel A: The north 10 feet of Tract A;

Parcel B: The east 30 feet of the north 90 feet of Tract A;

Parcel C: The north 105 feet, more or less, of the west 10 feet of the east 205 feet, more or less, of Tract A;

Parcel D: The north 180 feet, more or less, of the west 10 feet of the east 622 feet, more or less, of Tract A.

1% EXCISE TAX NOT REQUIRED

King Co. Records Division

By J. Teasloff, Deputy

1. Purpose. Grantee shall have the right to construct, operate, maintain, repair, replace and enlarge an underground electric transmission and/or distribution system upon and under the Right-of-Way together with all necessary or convenient appurtenances therefor, which may include but are not limited to the following: underground conduits, cables, communication lines; vaults, manholes, switches, and transformers; and semi-buried or ground mounted facilities. Following the initial construction of its facilities, Grantee may from time to time construct such additional facilities as it may require.

2. Access. Grantee shall have the right of access to the Right-of-Way over and across the Property to enable Grantee to exercise its rights hereunder, provided, that Grantee shall compensate Grantor for any damage to the Property caused by the exercise of said right of access.

3. Obstructions; Landscaping. Grantee may from time to time remove trees, bushes, or other obstructions within the Right-of-Way and may level and grade the Right-of-Way to the extent reasonably necessary to carry out the purposes set forth in paragraph 1 hereof, provided, that following any such work, Grantee shall, to the extent reasonably practicable, restore the Right-of-Way to the condition it was immediately prior to such work. Following the installation of Grantee's underground facilities, Grantor may undertake any ordinary improvements to the landscaping of the Right-of-Way, provided that no trees or other plants shall be placed thereon which would be unreasonably expensive or impractical for Grantee to remove and restore.

4. Grantor's Use of Right-of-Way. Grantor reserves the right to use the Right-of-Way for any purpose not inconsistent with the rights herein granted, provided: that Grantor shall not construct or maintain any building or other structure on the Right-of-Way which would interfere with the exercise of the rights herein granted; that no digging, tunneling or other form of construction activity shall be done on the Property which would disturb the compaction or unearth Grantee's facilities on the Right-of-Way, or endanger the lateral support to said facilities; and that no blasting shall be done within 15 feet of the Right-of-Way.

5. Indemnity. By accepting and recording this easement, Grantee agrees to indemnify and hold harmless Grantor from any and all claims for damages suffered by any person which may be caused by Grantee's exercise of the rights herein granted; provided, that Grantee shall not be responsible to Grantor for any damages resulting from injuries to any person caused by acts or omissions of Grantor.

6. Abandonment. The rights herein granted shall continue until such time as Grantee ceases to use the Right-of-Way for a period of five (5) successive years, in which event this easement shall terminate and all rights hereunder shall revert to Grantor, provided that no abandonment shall be deemed to have occurred by reason of Grantee's failure to initially install its facilities on the Right-of-Way within any period of time from the date hereof.

7. Successors and Assigns. The rights and obligations of the parties shall inure to the benefit of and be binding upon their respective successors and assigns.

A-582 Should this easement interfere with improvements Grantor desires to make to  
0327332 the real property affected by this easement, Grantor shall be entitled to  
KH/48 relocate this easement and any improvements placed in the easement area by  
214/35 Grantee, at Grantor's sole cost and expense, after giving Grantee thirty  
days' written notice.

2 sheets

FEB 7 1979

92-1-2

res DE AM



EASEMENT

7905080915

THIS AGREEMENT made this 16th day of April, 19 79,  
by and between the LAKEHAVEN SEWER DISTRICT, a municipal corporation of King  
County, Washington, hereinafter termed "Grantee", and SEA-TAC PLAZA, a Washington  
limited partnership  
hereinafter termed "Grantor".

WITNESSETH:

That the said Grantor for valuable consideration does by these presents  
grant unto the Grantee a perpetual right-of-way or easement for sewer mains  
with the necessary appurtenances through, over, and across the following  
property, described as follows:

THAT PORTION OF TRACT A, TRACT B AND TRACT C OF THE PLAT OF EVERGREEN  
PLAZA AS RECORDED IN VOLUME 100 OF PLATS, PAGES 74 AND 75, RECORDS OF  
KING COUNTY, WASHINGTON, DESCRIBED AS FOLLOWS:

THE WEST 15 FEET OF SAID TRACT B AND THE SOUTH 9.3 FEET OF THE WEST  
15 FEET OF TRACT A AND A STRIP 15 FEET WIDE BEING 7.5 FEET ON EACH SIDE  
OF THE FOLLOWING DESCRIBED CENTERLINE:

BEGINNING AT A POINT 21.7 FEET SOUTH AND 10 FEET EAST OF THE NORTHWEST  
CORNER OF SAID TRACT B; THENCE NORTH 59°41'55" EAST 378.06 FEET; THENCE  
SOUTH 89°34'08" EAST 342.62 FEET; THENCE NORTH 25°16'47" EAST  
164.76 FEET; THENCE NORTH 9°30'00" EAST 136.71 FEET TO A POINT ON THE  
NORTH LINE OF SAID TRACT A, A DISTANCE OF 7.5 FEET WEST OF THE NORTHEAST  
CORNER OF SAID TRACT A.

Should this easement interfere with improvements Grantor desires to make to the  
real property affected by this easment, Grantor shall be entitled to relocate this  
easement and any improvements placed in the easement area by Grantee, at Grantor's sole  
cost and expense, after giving Grantee thirty (30) days written notice.

1% EXCISE TAX NOT REQUIRED  
King Co. Records Division

By J. T. [Signature], Deputy

12 sheets

RELLIUS, WASHINGTON

MAY 8 1979

62-08-79



6.00  
LSI A W  
7912290536  
00846  
7912290536  
DEC-26-79

**PUGET  
POWER**

EASEMENT FOR UNDERGROUND ELECTRIC SYSTEM

RECORDED THIS DAY

7:22 10 10 PM '79

6

SEA-TAC PLAZA, a Washington Limited Partnership, RECORDS & COLLECTIONS  
KING COUNTY

("Grantor" herein), grants, conveys and warrants to PUGET SOUND POWER & LIGHT COMPANY, a Washington corporation ("Grantee" herein), for the purposes hereinafter set forth a perpetual easement under, across and over the following described real property (the "Property" herein) King County, Washington.

That portion of Tract A, Plat of Evergreen Plaza as recorded in Volume 100 of Plats, pages 74 and 75, records of King County, Washington, described as follows:

Commencing at the northwest corner of said Tract A; thence S 0°18'15" W 457.00 feet along the westerly line of said Tract A; thence S 89°34'08" E 196.88 feet; thence S 0°25'52" W 145.00 feet; thence S 89°34'08" E 121.78 feet; thence N 73°50'21" E 146.51 feet to the true point of beginning; thence N 73°50'21" E 30.06 feet to the point of curvature of a curve concave to the south having a radius of 165 feet; thence easterly along the arc of said curve 70.42 feet; thence N 24°24'39" E 121.33 feet; thence N 0°25'52" E 7.25 feet; thence N 89°34'08" W 147.86 feet; thence S 0°25'52" W 132.00 feet to the true point of beginning.

Located in the Southeast 1/4 of the Southwest 1/4 of Section 9, Township 21 North, Range 4 East, W.M.

Except as may be otherwise set forth herein Grantee's rights shall be exercised upon that portion of the Property (the "Right-of-Way" herein) described as follows:

A Right-of-Way 10 feet in width having 5 feet of such width on each side of a centerline described as follows:

The centerline of Grantee's facilities as constructed or to be constructed, extended or relocated under, over and across the above described property.

**FILED FOR RECORD AT REQUEST OF:**

**PUGET POWER  
REAL ESTATE DIVISION  
PUGET POWER BLDG.  
BELLEVUE, WASHINGTON 98009  
ATTENTION: GEORGE LERTKANTITHAM**

1. Purpose. Grantee shall have the right to construct, operate, maintain, repair, replace and enlarge an underground electric transmission and/or distribution system upon and under the Right-of-Way together with all necessary or convenient appurtenances therefor, which may include but are not limited to the following: underground conduits, cables, communication lines; vaults, manholes, switches, and transformers; and semi-buried or ground mounted facilities. Following the initial construction of its facilities, Grantee may from time to time construct such additional facilities as it may require.

2. Access. Grantee shall have the right of access to the Right-of-Way over and across the Property to enable Grantee to exercise its rights hereunder, provided, that Grantee shall compensate Grantor for any damage to the Property caused by the exercise of said right of access.

3. Obstructions; Landscaping. Grantee may from time to time remove trees, bushes, or other obstructions within the Right-of-Way and may level and grade the Right-of-Way to the extent reasonably necessary to carry out the purposes set forth in paragraph 1 hereof, provided, that following any such work, Grantee shall, to the extent reasonably practicable, restore the Right-of-Way to the condition it was immediately prior to such work. Following the installation of Grantee's underground facilities, Grantor may undertake any ordinary improvements to the landscaping of the Right-of-Way, provided that no trees or other plants shall be placed thereon which would be unreasonably expensive or impractical for Grantee to remove and restore.

4. Grantor's Use of Right-of-Way. Grantor reserves the right to use the Right-of-Way for any purpose not inconsistent with the rights herein granted, provided: that Grantor shall not construct or maintain any building or other structure on the Right-of-Way which would interfere with the exercise of the rights herein granted; that no digging, tunneling or other form of construction activity shall be done on the Property which would disturb the compaction or unearth Grantee's facilities on the Right-of-Way, or endanger the lateral support to said facilities; and that no blasting shall be done within 15 feet of the Right-of-Way.

5. Indemnity. By accepting and recording this easement, Grantee agrees to indemnify and hold harmless Grantor from any and all claims for injuries and/or damages suffered by any person which may be caused by the Grantee's exercise of the rights herein granted; provided, that Grantee shall not be responsible to Grantor for any injuries and/or damages to any person caused by acts or omissions of Grantor.

6. Abandonment. The rights herein granted shall continue until such time as Grantee ceases to use the Right-of-Way for a period of five (5) successive years, in which event this easement shall terminate and all rights hereunder shall revert to Grantor, provided that no abandonment shall be deemed to have occurred by reason of Grantee's failure to initially install its facilities on the Right-of-Way within any period of time from the date hereof.

7. Successors and Assigns. The rights and obligations of the parties shall inure to the benefit of and be binding upon their respective successors and assigns.

A-792 Should this easement interfere with improvements Grantor desires to  
KH/44 make to the real property affected by this easement, Grantor shall be  
0940012 entitled to relocate this easement and any improvements placed in  
2.14/35 the easement area by Grantee, at Grantor's sole cost and expense,  
after giving Grantee thirty days' written notice.

#788.37 1-79

EXCISE TAX NOT REQUIRED  
King Co. Records Division  
Deputy  
*J. T. [Signature]*

*AAW*



550

E WF

8002250543

08541

FEB-25-80

**AFTER RECORDING RETURN TO:**

WATER DISTRICT #124  
P.O. BOX 4249  
FEDERAL WAY, WA 98003

550

E A S E M E N T

THIS AGREEMENT, made this 7th day of January, 1980,  
by and between Sea-Tac Plaza  
hereinafter called "Grantors", and KING COUNTY WATER DISTRICT NO. 124, a municipi-  
pal corporation of King County, State of Washington, hereinafter called "Grantee".

WITNESSETH:

That said Grantor(s), for valuable consideration, do by these presents grant,  
bargain, sell, convey and confirm unto the said Grantee, a right-of-way or ease-  
ment for water mains, with necessary appurtenances, described as follows:

That portion of the following described property included within the limits  
of a strip of land 10 feet in width lying 5 feet on each side of the centerline  
of the water main constructed in the following described property;

Tracts A and B, Evergreen Plaza planned unit development, as recorded in  
Volume 100 of plats on pages 74 and 75, records of King County, Washington. Re-  
cording Certificate No. 7608300834.

And also that portion of strip of land lying 5 feet on each side of the  
centerline of water service mains lying between the water main constructed in the  
above described easement and hydrants;

And also that portion of land lying within a radius of 5 feet from the  
center of each hydrant served by the water main constructed in the above de-  
scribed easement.

Should this easement interfere with improvements Grantor desires to make to the  
real property affected by this easement, Grantor shall be entitled to relocate this  
easement and any improvements placed in the easement area by Grantee, at Grantor's  
sole cost and expense, after giving Grantee thirty (30) days written notice.

*SR W*

Evergreen Plaza, Tract A & B  
also known as SeaTac Plaza  
Agreement No. 20

RECORDS & ELECTIONS  
KING COUNTY

FEB 25 11 37 AM '80

RECORDED TIME MAY

RECORDED

FEB 25 1980

RECORDED



8002250543

8002250543

Corporate

STATE OF WASHINGTON)  
COUNTY OF KING )

On this 14<sup>th</sup> day of JANUARY A.D., 1980 before me personally appeared \_\_\_\_\_

Douglas L. Rogers to me known to be the Senior Vice President

\_\_\_\_\_ of the corporation that executed the foregoing instrument, and acknowledged said instrument to be the free and voluntary act and deed of said corporation, for the uses and purposes mentioned, and on oath stated that he is/~~are~~ authorized to execute the said instrument on behalf of the corporation.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my official seal the day and year first above written.



Bernadine E. Swenson  
Notary Public in and for the State of Washington, residing at Bellvue

RECEIVED  
JAN 23 1980  
FEDERAL WAY  
SEATTLE, WASH.

# EASEMENT ACT # 242320005000

Job RE  
R/W Reference 9107306N

## KNOW ALL MEN BY THESE PRESENTS:

For and in consideration of \$2000.00, the undersigned, hereinafter referred to as Grantor(s), hereby grants a perpetual easement to Pacific Northwest Bell Telephone Company, a Washington Corporation, its successors and assigns, hereinafter referred to as Grantee, with the right, privilege and authority to place, construct, maintain, inspect, reconstruct, repair, replace, remove and keep obstacles clear from Grantee's facilities consisting of underground communication lines, conduit, above ground cabinets and manhole

and other appurtenances as the Grantee may from time to time require over, across, upon and under the hereinafter described property situated in King County, State of Washington and is described as follows:

Township 21 North, Range 4 East, Section 9, W.M.

EVERGREEN PLAZA LOT 2 KING COUNTY SHORT PLAT NO 1079107  
Recording No. 7912270667

SUBJECT TO EASEMENTS and restrictions of record.

Said easement being the north fifteen feet of the east thirty five feet of the above described property and as shown on attached EXHIBIT "A".

\* Puget Power pedestal

Grantee shall at all times have the right of full and free ingress to and egress from said property described above, with the understanding that Grantee shall be responsible for all damage caused to Grantor arising from Grantee's exercise of the rights and privileges herein granted.

Grantor reserves the right to use the easement for any purposes as long as not inconsistent with nor an interference with the rights granted Grantee herein.

The rights, conditions and provisions of this easement shall inure to the benefit of and be binding upon the heirs, executors, administrators, successors and assigns of the respective parties hereto.

In witness whereof the undersigned has executed this instrument this 26<sup>th</sup> day of February, 1991.

Witness \_\_\_\_\_

By [Signature]  
Sea Tac Plaza

RECEIVED  
3/25/91  
McHastings

9205140334

Accepted by [Signature]  
Right-of-Way Manager

E1244650 05/14/1992 40.06 2000.00

IT IS DUE TO THE QUALITY OF THE DOCUMENT.

920514-0334 09:21:00 AM KING COUNTY RECORDS 003 JD 8.00

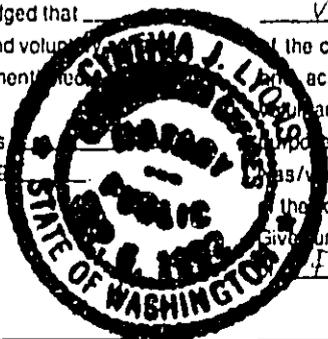
### (Individual Acknowledgement)

State of \_\_\_\_\_ } ss  
County of \_\_\_\_\_ }

On this day personally appeared before me \_\_\_\_\_

known to me to be the individual \_\_\_\_\_ who executed the foregoing instrument, and acknowledged that \_\_\_\_\_ signed the same as \_\_\_\_\_ free and voluntary, and for the uses and purposes herein mentioned.

Given under my hand and official seal this \_\_\_\_\_ day of \_\_\_\_\_, 1991.



Notary Public in and for the State of \_\_\_\_\_  
residing at \_\_\_\_\_  
My commission expires \_\_\_\_\_

### (Corporate Acknowledgement)

State of WASHINGTON } ss  
County of KING }

On this day personally appeared before me JAMES J. DUD, JR

who did say he/she is the EXECUTIVE VICE PRESIDENT

of the corporation that executed the foregoing instrument, and acknowledged said instrument to be the free and voluntary act and deed of said corporation, for the uses and purposes therein mentioned, and on oath stated that \_\_\_\_\_ are authorized to execute said instrument on behalf of the corporation.

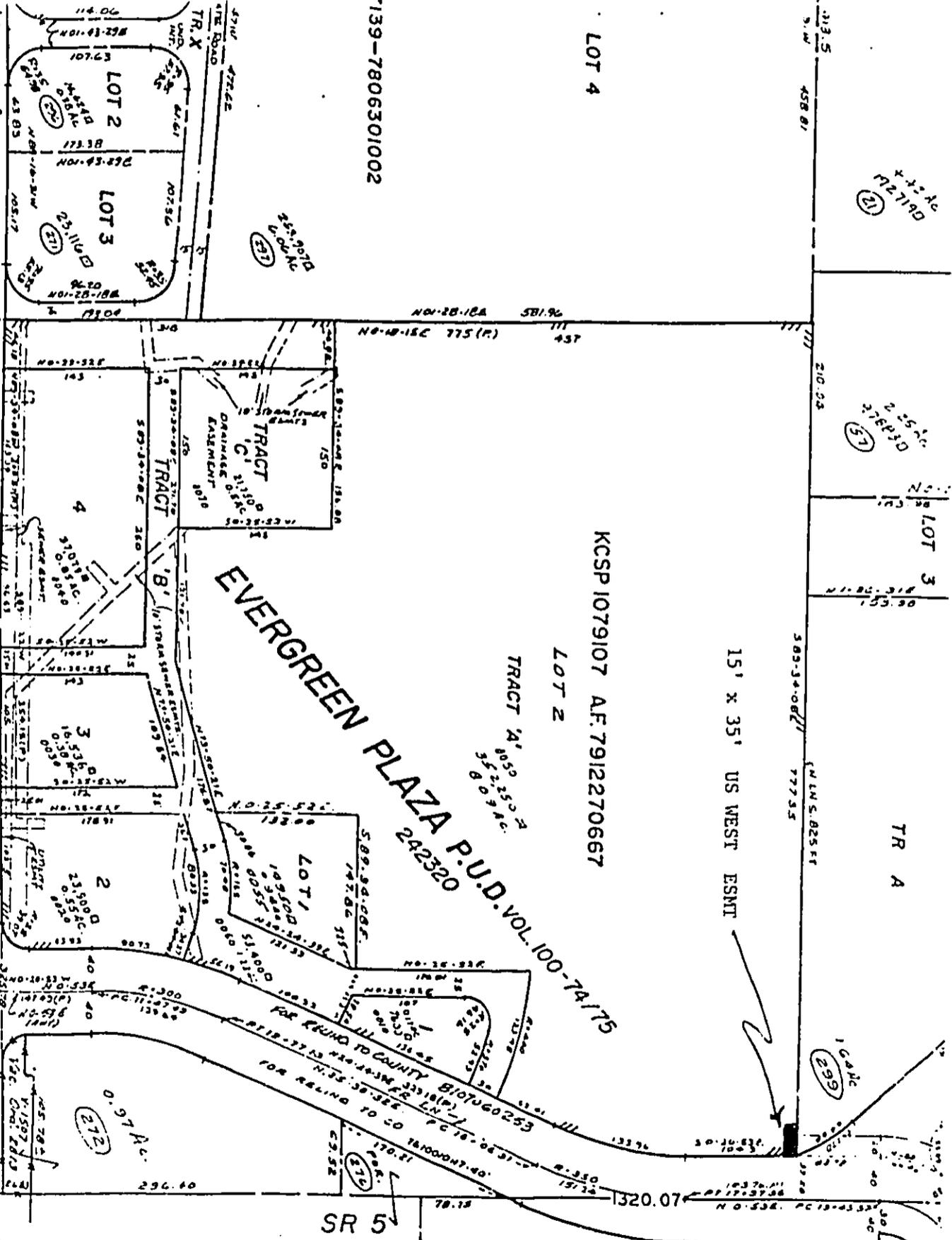
Given under my hand and official seal this 26<sup>th</sup> day of FEBRUARY, 1991.

Notary Public in and for the State of Washington  
residing at Seattle  
My commission expires 9/6/92

IT IS DUE TO THE QUALITY OF THE DOCUMENT.

EXHIBIT "A" 9107306N

FOR RETURN TO  
S. J. OTH ST  
PIERCE CO. LN TO JCT. S.S.H. NO. 5A, A.P.P. 10-28-1958.



SR 5  
PIERCE CO. LN. TO JCT. SSH 5A  
Apr 6/24/58 Sheet 8 of 20

T21N  
R4E  
SEC 9  
4330715026

LOT 4

739-7806301002

KCSP 1079107 A.F. 7912270667

LOT 2

TRACT 'A'  
80525500  
5729480

EVERGREEN PLAZA P.U.D. VOL. 100-74175  
242320

SR 5

PIERCE CO. LN. TO JCT. SSH 5A

Apr 6/24/58 Sheet 8 of 20

S. J. OTH ST

FOR RETURN TO

(S. 320 485A)

2-27

114.06

114.06

114.06

PLEASE RETURN TO:  
WASHINGTON NATURAL GAS CO  
RIGHT OF WAY DEPARTMENT  
P O BOX 1899  
SEATTLE WA 98111

O.P. Map No: 228.88  
Job No.: 9425055  
Location: SW 9-21-4E

EASEMENT

The Grantor, SEA-TAC PLAZA LIMITED PARTNERSHIP, a Washington limited partnership, in consideration of ONE DOLLAR (\$1.00), in hand paid, and other good and valuable consideration, receipt whereof is hereby acknowledged, does hereby convey and warrant to WASHINGTON NATURAL GAS COMPANY, a Washington Corporation, its successors and assigns, herein referred to as "Grantee", a non-exclusive easement for a gas pipeline or pipelines under, over, through and across the following described property of the Grantor located in the County of King, State of Washington: Tract "A" of Evergreen Plaza, as per plat recorded in Volume 100 of Plats, on Page 74, records of King County; Situate in the County of King, State of Washington. (Tax Parcel No. 242320-0050)

Easement location: Four (4) feet on either side of the centerline of the natural gas distribution line as constructed or to be constructed within the North 35 feet of the above described premises.

giving and granting to Grantee the right to construct, install, operate, maintain, protect, improve, repair, replace and abandon in place said gas pipeline or pipelines, together with the non-exclusive right of access to and from said property. As used herein, the term "pipeline" shall include gas lines and services together with such surface or sub-surface pipeline appurtenances and facilities as are necessary, in the judgement of Grantee, for the operation and maintenance of said pipeline or pipelines. By the acceptance of this easement Grantee agrees to hold the Grantor harmless from any loss, cost or damage resulting from the operation or maintenance of such pipeline or pipelines except as may be attributable to the sole negligence of Grantor. Grantor agrees not to erect any structures on said easement.

DATED this 19<sup>th</sup> day of October, 1994.

Landlord:  
SEA-TAC PLAZA LIMITED PARTNERHSIP,  
a Washington limited partnership

Tenant:

BY: Tri-Center Associates,  
a Washington general partnership,  
General Partner

By: \_\_\_\_\_

By: James J. Doud, Jr.  
James J. Doud, Jr  
Its: President

State of Washington )  
                                  )  
County of King        )

I certify that I know or have satisfactory evidence that James J. Doud, Jr. is the person who appeared before me, and said person acknowledged that he signed this instrument, on oath stated that he was authorized to execute the instrument and acknowledged it as the President of Tri-Center Associates to be the free and voluntary act of such part for the uses and purposes mentioned in the instrument.

Dated: 10-19-94

Barbara R. Dunn  
Notary Public in and for the State of  
Washington, residing at Redmond

My commission expires: \_\_\_\_\_

State of Washington )  
                                  )  
County of King        )

I certify that I know or have satisfactory evidence that \_\_\_\_\_ is the person who appeared before me, and said person acknowledged that he signed this instrument, on oath stated that he was authorized to execute the instrument and acknowledged it as the \_\_\_\_\_ of \_\_\_\_\_ to be free and voluntary act of such part for the uses and purposes mentioned in the instrument.

Dated: \_\_\_\_\_

Notary Public in and for the State of  
Washington, residing at \_\_\_\_\_

My commission expires: \_\_\_\_\_

9411180603

7.00

941118-0603 11:16:00 AM KING COUNTY RECORDS 001 5A

7000.00  
124.60  
E1404595 11/18/1994

Return Address

City of Federal Way  
Attn: Law Dept  
P O Box 9718  
Federal Way, WA 98063-9718



20001117001156

FEDERAL WAY CI EAS 12 00  
PAGE 001 OF 005  
11/17/2000 14:44  
KING COUNTY, WA

**PERMANENT BEAUTIFICATION EASEMENT**

Grantor (s) DCG III, L L C , a Washington Limited Liability Company  
Grantee (s) CITY OF FEDERAL WAY, a Washington Municipal Corporation  
Property Legal Description (abbrev): Tract B, Evergreen Plaza, Vol 100, pgs 74-75, Additional  
Legal(s) on Exhibit A  
Easement Legal Description (abbrev) Ptn Tract B, Evergreen Plaza, Vol 100, pgs 74-75, Additional  
Legal(s) on Exhibit B  
Assessor's Tax Parcel ID#(s) 242320-0060-08

**RECITALS**

- A DCG II, L L C , a Washington Limited Liability Company ("Grantor") is the owner of certain real property (the "Property") located in Federal Way, Washington, and legally described in Exhibit "A" attached hereto and incorporated herein by reference
- B The CITY OF FEDERAL WAY, a Washington Municipal Ccorporation ("Grantee"), desires to construct beautification improvements, including street trees, decorative lights, speciality landscaping, and decorative sidewalks, along South 320<sup>th</sup> Street within the City Center Core The City requires a portion of the Property in which to locate the improvements
- C The parties both desire to avoid eminent domain proceedings, and to resolve matters without further cost or expense Therefore, for valuable consideration, the receipt of which is hereby acknowledged, and under threat of the exercise of eminent domain, the parties agree as follows

2000 111 7001156

**EASEMENT AGREEMENT**

**1 Grant of Easement** Grantor grants, conveys and warrants to the ("Grantee") a perpetual, permanent beautification easement ("Easement") under, across and over that portion of the Property legally described in Exhibit B attached hereto and incorporated herein by reference Grantee and its agents, designees and/or assigns shall have the right, without prior notice to Grantor, at such times as deemed necessary by Grantee, to enter upon, over or under the Easement to inspect, construct, reconstruct, operate, maintain, repair, replace and enlarge decorative sidewalks (or portions thereof), landscaping, street trees, decorative landscaping lighting and street lights, and associated appurtenances (including without limitation landscaping irrigation and power for the decorative lighting) Following the initial construction of the improvements, Grantee may from time to time construct such additional improvements as it may require Nothing in this Easement shall obligate the Grantee to commence or complete the improvements within a specific period of time, provided, however, the Grantee shall use diligent efforts to complete all work within, and to restore, the Easement within a reasonable period of time after commencing such work

2000 111 7001156

**2 Access** Grantor also covenants and agrees that, upon reasonable notice to Grantor, Grantee shall have the right of access to the Easement over and across the Property to enable Grantee to exercise its rights hereunder

**3. Obstructions, Landscaping** Grantee may from time to time remove vegetation, trim and/or maintain trees, or other obstructions within the Easement, and may level and grade the Easement to the extent reasonably necessary to carry out the purposes set forth in paragraph 1 hereof, provided, that following any such work, Grantee shall, to the extent reasonably practicable, restore the Easement and Grantor's Property to a condition similar to its condition prior to such work Following the construction and installation of the improvements, Grantor shall from time to time trim and/or maintain the landscaping (other than the trees) within the Easement In addition, Grantor may make such other regular or typical landscaping improvements within the Easement, provided that no trees or other plants shall be placed thereon which in the judgment of the grantee would be unreasonably expensive or impractical for Grantee to maintain, remove or restore If the Grantor fails to trim and/or maintain the landscaping after written notice from the Grantee, Grantee may also remove, trim and/or maintain the landscaping within the Easement

**4 Grantor's Use of Easement** This Easement shall be exclusive to Grantee, provided, however, Grantor reserves the right to use the Easement for any purpose not inconsistent with Grantee's rights Grantor shall not construct or maintain any buildings or other structures on the Easement Grantor shall not perform digging, tunneling or other form of construction activity on the Property, which would disturb the compaction of or damage any improvements within the Easement, and no blasting shall be done within fifteen (15) feet of the Easement Grantor shall not prune, trim, limb or remove any of the trees within the Easement, without advance written authorization of Grantee

**5. Indemnification** Grantor and Grantee agree to indemnify and hold the other, its elected officials, officers, employees, agents, and volunteers harmless from any and all claims, demands, losses, actions and liabilities (including costs and all attorney fees) to or by any and all persons or entities, including, without limitation, their respective agents, licensees, or representatives, arising from, resulting from, or connected with the negligence or intentional misconduct of each other or each other's agents or invitees within or with respect to the Easement

**6. Successors and Assigns** The rights and obligations described herein shall run with the land, shall inure to the benefit of the Grantor and Grantee, and shall be binding upon their respective successors, heirs and assigns

DATED THIS 10 day of OCTOBER, 2000

**GRANTOR (Corporate)**

DCG II, L L C

By D. Michael Dunne  
(signature)

D MICHAEL DUNNE  
(typed/printed name)

MANAGING PARTNER  
(title)

GRANTEE.

CITY OF FEDERAL WAY

By *David H. Moseley*  
David H. Moseley, City Manager

Approved as to Form

*Bob C. Sterbank*  
Bob C. Sterbank, Interim City Attorney

[Corporate Notary]

STATE OF WASHINGTON )  
 ) ss  
COUNTY OF KING )

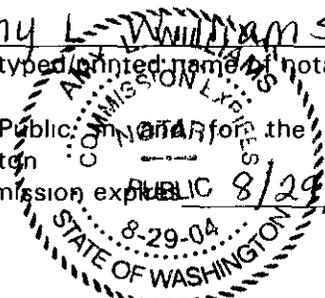
On this day personally appeared before me *D. Michael Dunne*, to me known to be the *managing partner* of *DCG II LLC*, the corporation that executed the foregoing instrument, and acknowledged the said instrument to be the free and voluntary act and deed of said corporation, for the uses and purposes therein mentioned, and on oath stated that he/she was authorized to execute said instrument and that the seal affixed, if any, is the corporate seal of said corporation

Given under my hand and official seal this *10<sup>th</sup>* day of *October*, 2000

*Amy L. Williams*  
(notary signature)

*Amy L. Williams*  
(typed/printed name of notary)

Notary Public in and for the State of Washington  
My commission expires *8/29/04*



K \STREETS\PROJECTS\23RD\ROW\DCG II wpd  
10-04-2000

[City Manager Notary]

STATE OF WASHINGTON )  
 ) ss  
COUNTY OF KING )

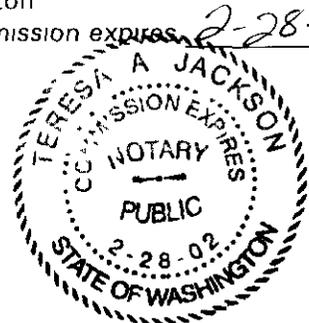
On this day, personally appeared before me, the undersigned, a Notary Public in and for the State of Washington, duly commissioned and sworn, David H. Moseley, to me known to be the City Manager of the City of Federal Way, a Washington municipal corporation, the corporation that executed the foregoing instrument, and acknowledged the said instrument to be the free and voluntary act and deed of said corporation, for the uses and purposes therein mentioned, and on oath stated that he was authorized to execute the said instrument

Given under my hand and official seal this *14<sup>th</sup>* day of *November*, 20\_\_

*Teresa A. Jackson*  
(notary signature)

*Teresa A. Jackson*  
(typed/printed name of notary)

Notary Public in and for the State of Washington  
My commission expires *2-28-02*



2000 111 7001156

EXHIBIT A

LEGAL DESCRIPTION OF SERVIENT PROPERTY

Tract B, Evergreen Plaza, according to the plat thereof recorded in Volume 100 of Plants, pages 74 and 75, in King County, Washington

2000 111 7001156

EXHIBIT B

EASEMENT LEGAL DESCRIPTION

All portions of Tract B, Evergreen Plaza, according to the plat thereof recorded in Volume 100 of Plats, pages 74 and 75, located south of a line which is 5 feet north and parallel to South 320th Street (P S H No 5) right-of-way, said line defined in County Recording Numbers 2726484, 2726485, and 2748762

2000 111 7001156



**20010302002469**  
 COMMONWEALTH L EAS 13 00  
 PAGE 001 OF 006  
 03/02/2001 15:07  
 KING COUNTY, WA

Return Address

Name Wendy's International, Inc

Address 4288 W Dublin-Granville Rd

City, State, Zip Dublin, OH 43017  
 Attn Jo Williams/legal dept

\*\*\*\*\*  
**Document Title(s)** (or transactions contained therein)

**COMMONWEALTH LAND TITLE** 13/6  
**REF: 905-393 2 (4)**

- 1 Easement
- 2
- 3
- 4

\*\*\*\*\*  
**Reference Number(s) of Documents assigned or released.**  
 (on page \_\_\_\_ of document(s))

\*\*\*\*\*  
**Grantor(s)** (Last name first, then first name and initials)

- 1 DCG II, LLC, a Washington limited liability company
- 2
- 3
- 4
- 5 Additional names on page \_\_\_\_ of document

\*\*\*\*\*  
**Grantee(s)** (Last name first, then first name and initials)

- 1 Wendy's International, Inc , an Ohio corporation
- 2
- 3
- 4
- 5 Additional names on page \_\_\_\_ of document

\*\*\*\*\*  
**Legal description** (abbreviated i e lot, block, plat or section, township, range Lots 1 & 2 Short Plat  
 No 1079107, recording no 7912270667  
 Additional legal is on page \_\_\_\_ of document

\*\*\*\*\*  
**Assessor's Property Tax Parcel/Account Number 243320-0050-00 & 243320-0055-05**

*The Auditor or Recording Officer will rely on the information provided on this form The staff will not read the document to verify the accuracy of or the completeness of the indexing information provided herein*

2001 030 2002469

WHEN RECORDED RETURN TO

Wendy's International, Inc  
Legal Department / Jo Williams  
4288 W Dublin Granville Road  
Dublin, Ohio 43017

**EASEMENT**

This Easement is made and entered into this 31 day of January, 2000, by and between **DCG II, LLC**, a Washington Limited Liability Company (hereinafter referred to as "**Grantor**"), whose mailing address is C/O Summit Properties, 25022 104<sup>th</sup> Avenue SE, Suite B, Kent, Washington 98031, and **WENDY'S INTERNATIONAL, INC.**, an Ohio corporation (hereinafter referred to as "**Grantee**"), whose mailing address is 4288 West Dublin-Granville Road, P.O. Box 256, Dublin, Ohio 43017

WITNESSETH.

WHEREAS, Grantor is the owner of that certain real estate located in the State of Washington and County of King, more particularly described in the **Exhibit A** attached hereto and made a part hereof (which real estate is hereinafter referred to as "**Grantor's Parcel**"), and

WHEREAS, Grantee is the owner of that certain real estate located in the State of Washington and County of King, more particularly described in the **Exhibit B** attached hereto and made a part hereof (which real estate is hereinafter referred to as "**Grantee's Parcel**"), and

WHEREAS, Grantor and Grantee desire to establish certain easements and covenants in connection with the use of their respective parcels

NOW, THEREFORE, in consideration of the sum of Ten Dollars (\$10 00) and other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged by Grantor, Grantor and Grantee agree as follows

Grantor hereby grants, conveys and delivers to Grantee, for the use and benefit of Grantee, its successors and assigns, a non-exclusive perpetual easement appurtenant to Grantee's Parcel for the purpose of the maintenance, repair, use, operation and inspection of water lines to service Grantee's Parcel, over, upon, across and through Grantor's Parcel.

TO HAVE AND TO HOLD the easement and rights unto Grantee, its successors and assigns forever Grantor, for Grantor and Grantor's successors and assigns, hereby warrants and covenants with Grantee, its successors and assigns, that Grantor is the true and lawful owner in fee simple of Grantor's Parcel and has the right and full power to grant and convey the easement and rights herein granted, and that Grantor will warrant and defend the easement and rights herein granted against all claims of all persons whomsoever

2001 030 2002469

The above-described easements and covenants shall be for the use and benefit of Grantee's Parcel and the owners from time to time of all or any part thereof. All provisions of this Easement, including the covenants, benefits and burdens, shall run with the land and be binding upon and inure to the successor, assigns and tenants of Grantee and Grantor. The rule of strict construction shall not apply to this grant. This grant shall be given a reasonable construction so that the intention of the parties to confer a commercially usable right of enjoyment on Grantee is carried out.

IN WITNESS WHEREOF, this Easement is executed as of the day and year first above written.

DCG II, LLC, a Washington Limited Liability Company

By D. Michael Dunne  
Name: D Michael Dunne  
Title: Managing Member

WENDY'S INTERNATIONAL, INC.,  
An Ohio corporation

By W. Stephen Wirt  
Name: W. STEPHEN WIRT  
Title: Vice President

By Ronald E. Wallace  
Name: RONALD E. WALLACE  
Title: Vice President

Law Dept SA

RICHARD S. PLUTE  
STATE OF WASHINGTON  
NOTARY --- PUBLIC  
MY COMMISSION EXPIRES 8-08-01

6972362 500 1002

STATE OF WASHINGTON  
COUNTY OF KING, SS:

The undersigned, a Notary Public in and for the above state and county, hereby certifies that on the 12 day of DEC, 2000, before me personally appeared D Michael Dunne, the Managing Member of DCG II, LLC, a Washington Limited Liability Company, who is known to me as the person and managing member described in and who executed the foregoing instrument on behalf of said company, and who acknowledged that he held the position or title set forth in the instrument and certificate, he signed the instrument on behalf of the company by proper authority, and the instrument was the act of the company for the purposes therein stated.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my official seal on the day and year last aforesaid

(SEAL)

Richard S. Plute  
Notary Public

STATE OF OHIO  
COUNTY OF FRANKLIN, SS

The undersigned, a Notary Public in and for the above state and county, hereby certifies that on the 17<sup>th</sup> day of November, 2000, before me personally appeared W. STEPHEN WIRT and RONALD E. WALLACE the Vice President, and Vice President of **WENDY'S INTERNATIONAL, INC.**, an Ohio corporation, who are known to me as the persons and officers described in and who executed the foregoing instrument on behalf of said corporation, and who acknowledged that they held the positions or titles set forth in the instrument and certificate, that they signed the instrument on behalf of the corporation by proper authority, and that the instrument was the act of the corporation for the purposes therein stated

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my official seal on the day and year last aforesaid



**DARCY B. MIHAL**  
NOTARY PUBLIC, STATE OF OHIO  
MY COMMISSION EXPIRES AUGUST 23, 2005

*Darcy B. Mihal*  
Notary Public

2001 030 2002469

THIS INSTRUMENT PREPARED BY

Stephen Harper, Attorney at Law  
WENDY'S INTERNATIONAL, INC  
4288 West Dublin-Granville Road  
Dublin, Ohio 43017

**EXHIBIT A**

Lot 2 of Short Plat No. 1079107, recorded under Recording No 7912270667, records of King County, Washington,

Except that portion described as follows:

Beginning at the northwest corner of Lot 1 of Short Plat No 1079107, recorded under Recording No 7912270667, said corner being a common corner with Lot 2 of said Short Plat,

Thence South 89°34'08" East along the line common to Lots 1 and 2 of said Short Plat a distance of 147.86 feet to the southeast corner of said Lot 2,

Thence North 00°25'52" East along the east line of said Lot 2 a distance of 50.00 feet,

Thence North 89°34'08" West parallel to the south line of said Lot 2 a distance of 147.86 feet,

Thence South 00°25'52" West 50.00 feet to the point of beginning

2007 030 2002469

**EXHIBIT B**

Lot 1 of Short Plat No. 1079107, recorded under Recording No 7912270667, records of King County, Washington

Together with that portion of Lot 2 of Short Plat No 1079107, recorded under Recording No 7912270667, records of King County, Washington, described as follows

Beginning at the northwest corner of Lot 1 of Short Plat No 1079107, recorded under Recording No 7912270667, said corner being a common corner with Lot 2 of said Short Plat,

Thence South 89°34'08" East along the line common to Lots 1 and 2 of said Short Plat a distance of 147.86 feet to the southeast corner of said Lot 2,

Thence North 00°25'52" East along the east line of said Lot 2 a distance of 50.00 feet,

Thence North 89°34'08" West parallel to the south line of said Lot 2 a distance of 147.86 feet,

Thence South 00°25'52" West 50.00 feet to the point of beginning

2007 030 2002469

Recording Requested By

SeaTac Plaza Corporation

When Recorded Mail To

CITY OF FEDERAL WAY  
ATT Legal Department  
P O Box 9718  
Federal Way, WA 98063



EXHIBIT "B" TO EASEMENT PURCHASE AND SALE AGREEMENT

**PERMANENT AND TEMPORARY CONSTRUCTION EASEMENT FOR SURFACE WATER FACILITIES**

Grantor (s) DCG II LLC

Grantee (s) CITY OF FEDERAL WAY

Property Legal Description (abbreviated) Lot 2, King County Short Plat Number 1079107, Tract B of the Plat of Evergreen Plaza, Vol 100 of Plats, Pages 74-75 in King County, Washington  
Easement Legal Descriptions (abbreviated) The West 30 feet of Lot 2 of King County Short Plat 1079107, together with West 30 feet of Tract B of the Plat of Evergreen Plaza as recorded in Volume 100 of Plats at page 74 and 75 (Permanent Easement), North 30 feet of Lot 2 of King County Short Plat 1079107 (Temporary Construction Easement) Entire Legal(s) on Exhibits A and B, pages 4 and 6.

Assessor's Tax Parcel ID#(s) 2423200050 and 2423200060

2002 011 1002121

**1. Grant of Permanent Easement.** DCG II LLC, a Washington limited liability corporation ("Grantor"), owns certain real property (the "Servient Property") located in Federal Way, Washington, legally described as follows

Lot 2, King County Short Plat Number 1079107, recorded under Recording Number 7912270667, in King County, Washington

AND Tract B, Evergreen Plaza, according to the plat thereof recorded in Volume 100 of Plat, page 74 and 75, in King County, Washington

For and in consideration of Ten Dollars (\$10 00) and other valuable consideration, the receipt of which is hereby acknowledged, Grantor grants, conveys and warrants to the CITY OF FEDERAL WAY, a Washington municipal corporation ("Grantee") for the purposes hereinafter set forth a

permanent, perpetual easement ("the Permanent Easement") under, across and over that portion of the Servient Property legally described in Exhibit 1 and depicted on Exhibit 2, both of which are attached hereto and incorporated herein by this reference

**2. Purpose of Easement.** The purpose of the Easement is to allow Grantee to construct, reconstruct, operate, maintain, repair, replace, remove, grade, and excavate surface water facilities ("Facilities") within the Easement Grantee and its agents, designees and/or assigns shall have the right, without prior notice to Grantor, at such times as deemed necessary by Grantee, to enter upon the Property in furtherance of the purposes of the Easement described herein

**3. Access.** Grantee shall have the right of access to the Easement over and across the improved driveways and parking lot existing on the Servient Property, or by any other method mutually agreeable to Grantor and Grantee, to enable Grantee to exercise the rights granted hereunder by utilizing the improved driveway existing on the Servient Property Grantee agrees to keep Grantor informed as to the routes of access utilized under this paragraph

**4. Obstructions; Landscaping.** Grantee may remove vegetation, trees, or other obstructions within the Easement, and may level and grade the Easement to the extent reasonably necessary to carry out the purposes set forth in Paragraph 2 hereof, provided, that following any such work, Grantee shall, to the extent reasonably practicable, restore the Easement to a condition similar to its condition prior to such work

**5. Grantor's Use of Permanent Easement.** The Permanent Easement shall be exclusive to Grantee, provided, however, Grantor reserves the right to use the Easement for any purpose not inconsistent with Grantee's rights provided further, that Grantor shall not construct or maintain any buildings or other structures on the Permanent Easement, that Grantor shall not perform grading or other form of construction activity on the Property, which would alter the functioning of the Facilities, and that Grantor shall not blast within fifteen (15) feet of the Easement

**6. Grant of Temporary Easement.** Grantor also grants, conveys and warrants to Grantee a temporary construction easement (the "Temporary Easement") under, across and over certain real property legally described in Exhibit 3 hereto and depicted on Exhibit 2, both of which are attached hereto and incorporated herein by this reference The Temporary Easement is to provide additional property for use during construction of the Facilities, including but not limited to stockpiling of supplies and equipment storage The Temporary Easement shall remain in effect from the date of this Easement document through construction and until such time the Facilities have been accepted for operation by the Grantor

**7. Successors and Assigns.** The terms of this Permanent Easement, and the rights and obligations of the Grantor and Grantee provided herein, are intended to and shall be benefits and servitudes upon the Servient Property and shall run with the land and bind and inure to the benefit of the parties hereto, their respective heirs, personal representatives, tenants, successors, heirs and/or assigns

2002 011 1002121

DATED THIS 2 day of November, 2001

**GRANTOR**  
DCG II LLC

By: D. Michael Dunne  
(Signature)

D Michael Dunne  
(Type/printed name)

Managing Partner  
(Title)

**[Corporate Notary]**

STATE OF )  
) ss  
COUNTY OF )

On this day personally appeared before me D. Michael Dunne,  
to me known to be the managing partner of  
DCG II LLC, the corporation that executed the  
foregoing instrument, and acknowledged the said instrument to be the free and voluntary act and  
deed of said corporation, for the uses and purposes therein mentioned, and on oath stated that  
he/she was authorized to execute said instrument and that the seal affixed, if any, is the corporate  
seal of said corporation

GIVEN my hand and official seal this 2 day of November, 2001  
Delane Hand  
Delane Hand  
(typed/printed name of notary)

Notary Public in and for the State of Washington  
My commission expires 9 19 04

**APPROVED AS TO FORM:**

By Bob C Sterbank  
Bob C Sterbank, City Attorney



2002 011 1002121

**PERMANENT EASEMENT LEGAL DESCRIPTION**

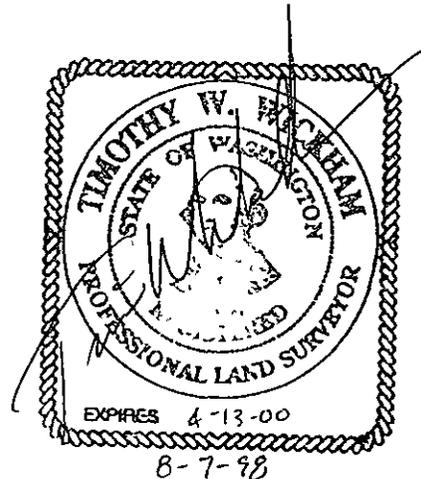
THAT PORTION OF TRACT B OF THE PLAT OF EVERGREEN PLAZA AS RECORDED IN VOLUME 100 OF PLATS AT PAGE 74 AND 75 , RECORDS OF KING COUNTY, WASHINGTON, DESCRIBED AS FOLLOWS

BEGINNING AT THE SOUTHWEST CORNER OF SAID TRACT B, SAID CORNER ALSO BEING THE SOUTHWEST CORNER OF SAID PLAT, THENCE NORTH 00°18'15" EAST ALONG THE WEST LINE OF SAID TRACT B, 318 00 FEET TO THE NORTHWEST CORNER OF SAID TRACT B, THENCE SOUTH 89°34'08" EAST ALONG THE NORTH LINE OF SAID TRACT B, 30 00 FEET, THENCE SOUTH 00°18'15" WEST, 318 00 TO THE SOUTH LINE OF SAID TRACT B, THENCE NORTH 89°34'08" WEST ALONG SAID SOUTH LINE , 30 00 FEET TO THE POINT OF BEGINNING

TOGETHER WITH THE WEST 30 FEET OF LOT 2 OF KING COUNTY SHORT PLAT 1079107 AS RECORDED UNDER RECORDING NUMBER 7912270667, RECORDS OF KING COUNTY, WASHINGTON

CONTAINING 23,250 SQUARE FEET

2002 011 1092121



KCSP 182027  
AFN 8403140752

KCSP 480019R  
AFN 8004280455

30 TEMPORARY EASEMENT

30 PERMANENT EASEMENT

LOT 2  
KCSP 1079107  
AFN 7912270667

LOT 1

LOT 1  
KCSP 1079107  
AFN7912270667

TRACT C

30' PERMANENT EASEMENT

TRACT B

LOT 4

LOT 3

LOT 2

POINT OF BEGINNING

S 320TH ST

23RD AVES

EVERGREEN PLAZA

### PERMANENT AND TEMPORARY EASEMENTS

DATE AUGUST 7 1998

ACAD No 1497REC

## E A R T H T E C H



100 W Broadway  
Ste 5000  
Long Beach CA 90802-4443  
310 495-4449

10800 NE 8th St  
7th Floor  
Bellevue WA 98004  
206 455-9494

720 S 333 St Ste 200  
Federal Way WA 98003  
206 838-6202

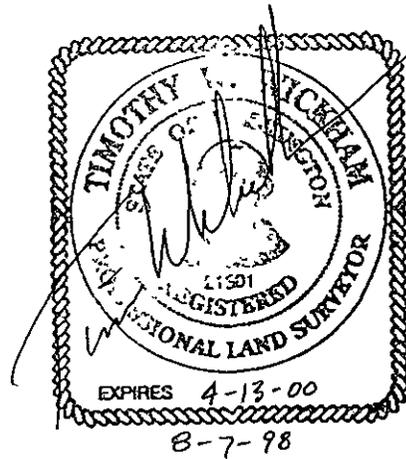
1200 Dupont St Ste 2-B  
Bellingham WA 98225  
360 734-3202

2002 011 1002121

**TEMPORARY EASEMENT LEGAL DESCRIPTION**

THE NORTH 30 FEET OF THE EAST 245 50 FEET OF THE WEST 275 50 FEET OF LOT 2 OF KING COUNTY SHORT PLAT 1079107 AS RECORDED UNDER RECORDING NUMBER 7912270667, RECORDS OF KING COUNTY, WASHINGTON

CONTAINING 7365 SQUARE FEET



2002 011 1002121



20020326002343

MILLER  
PAGE 001 OF 023  
03/25/2002 13:41  
KING COUNTY, WA

Return Address

Name City of Federal Way  
at City Attorney's Office  
Address P.O. Box 9718

City, State, Zip Federal Way, WA 98003

Document Title(s) (or transactions contained therein)

- 1 Easement Purchase and Sale Agreement
- 2
- 3
- 4

Reference Number(s) of Documents assigned or released:  
(on page \_\_\_\_\_ of document(s))

Grantor(s) (Last name first, then first name and initials)

- 1 DCG II, LLC
- 2
- 3
- 4
- 5 Additional names on page \_\_\_\_\_ of document

Grantee(s) (Last name first, then first name and initials)

- 1 City of Federal Way
- 2
- 3
- 4
- 5 Additional names on page \_\_\_\_\_ of document.

EXCISE TAX NOT REQUIRED  
King Co. Records Division  
By P. Hudgel Deputy

Legal description (abbreviated i e lot, block, plat or section, township, range)

Additional legal is on page \_\_\_\_\_ of document

Assessor's Property Tax Parcel/Account Number 2423200050 + 2423200060

Additional legal is on page \_\_\_\_\_ of document

The Auditor/Recorder will rely on the information provided on the form. The staff will not read the document to verify the accuracy or completeness of the indexing information provided herein.

WASHINGTON STATE COUNTY AUDITOR/RECORDER'S  
INDEXING FORM (Cover Sheet)

2002 032 6002343

**EASEMENT PURCHASE AND SALE AGREEMENT**

This agreement ("Agreement") made this 24<sup>th</sup> day of May, 2000 between the City of Federal Way, a Washington municipal corporation ("City"), and DCG II LLC, a Washington limited liability corporation ("DCG").

Whereas, the City intends to, in the near term, construct and maintain the SeaTac Mall Detention improvement project ("the Project"), and in the long term construct and maintain certain grid streets in the downtown City Center Core as shown in the City's adopted GMA Comprehensive Plan; and

Whereas, DCG is the owner of certain real property located in Federal Way, Washington, legally described in Exhibit A hereto ("the Property"); and

Whereas, portions of the Property are required by the City for the Project and for construction of a certain grid street shown in the City's adopted GMA Comprehensive Plan, and

Whereas, the Federal Way City Council has adopted Ordinance No 98-317, authorizing condemnation of a portion of the DCG property for the Project;

Whereas, DCG wishes to redevelop a portion of its property currently devoted to surface water drainage facilities; and

Whereas, the parties wish to avoid condemnation litigation and the attendant cost, delay, and uncertainty, and in consideration for the mutual agreements contained below,

NOW, THEREFORE, THE PARTIES AGREE AS FOLLOWS.

1. Transfer of Ownership

1.1 Easement Area. DCG shall convey to the City at closing a permanent easement and temporary construction easement by fully executing, delivering and recording an easement in the form attached hereto as Exhibit "B" and incorporated herein by this reference ("Permanent Easement"). The Permanent and Temporary Construction Easement affects a portion of the Property (the "Easement Area") and is legally described and depicted in exhibits 1 and 2 to Exhibit "B"

1.2 Tract "X" Reservation and Future Dedication DCG covenants and agrees to reserve Tract X, located along the west boundary of the Property and of Tract B of the Plat of Evergreen Plaza, as recorded at Volume 100, Page 74-75 of Plats, Records of King County, Washington, and as depicted and legally described in Exhibits C and D hereto. DCG further

**Project File**

2002 032 6:02343

covenants and agrees to dedicate Tract X to the City for right-of-way, street and utility purposes at such time as the City determines, in its sole discretion, that Tract X is needed for those purposes. A Statutory Warranty Deed, in the form attached as Exhibit E and conveying Tract X (subject to all matters of record), shall be executed by all owners of Tract X (including DCG, its heirs, grantees, and assigns, as applicable) and shall be delivered to the City of Federal Way within fourteen (14) days of the City's demand therefor.

## 2 Project and Other Conditions

2.1. Agreement Not to Protest LID. DCG covenants and agrees to participate in, and not oppose or protest, the formation of a Limited Improvement District ("LID") pursuant to RCW 35.43 designed to construct, maintain and/or improve a road upon Tract X. The timing of any LID shall be determined by the City of Federal Way, in its sole discretion.

2.2. Use of Tract X. During the period between the date of this Agreement and the date of the conveyance of Tract X as provided herein, DCG covenants and agrees that it shall not install or construct any structures on or within the boundaries of Tract X, and that DCG shall be responsible, at its sole cost and expense, for removing any structures on or within Tract X prior to its conveyance to the City. Until such time as Tract X is conveyed as provided herein, however, nothing in this paragraph shall prohibit DCG from paving or using Tract X for ingress, egress, parking, or landscaping, or from maintaining any rockeries or other structures providing lateral support and existing as of the date of closing. DCG can maintain its project sign in its current location to the extent that the sign meets all sign code requirements and does not present a public safety problem. If DCG replaces or repairs the sign, to comply with Federal Way City Code requirements or otherwise, or if the City authorizes construction of a road within Tract X, DCG must relocate the sign to a location outside of Tract X, or to a new location within Tract X approved by the Federal Way Public Works Director.

2.3. Storm Water Drainage - Volume. In consideration of DCG's agreement to grant a permanent easement as provided in Paragraph 1.1, and to reserve and agree to dedicate Tract X as provided in Paragraph 1.2, the City agrees to provide in the Project sufficient conveyance volume, and to provide sufficient storage capacity at the S336th/Kitts Regional Storage Facility. For purposes of this Paragraph, "sufficient conveyance volume" and sufficient storage capacity" mean the volume and capacity necessary to accommodate the volume of treated storm water generated by 2- and 10 year storms, as determined by application of the HSPF method and Federal Way City Code requirements existing as of the date of this Agreement. "Sufficient conveyance volume" and sufficient storage capacity" as used herein shall account for that volume of treated storm water which would naturally drain from the Property (including Tract C of the Plat of Evergreen Plaza, Volume 100, Page 74-75 of Plats) and any other property that as of the date of the Agreement uses Tract C as a storm water detention facility, assuming that the Property, Tract C and any other property using Tract C as a storm water detention facility were fully developed with the maximum allowable amount of impervious surface area. Accordingly, subject to Paragraph 2.5 below, the City agrees that for a period of ten (10) years from the date of this Agreement, or until completion of the first redevelopment of the Property, whichever

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occurs first, DCG shall not be required, as a condition of redevelopment of the Property, including Tract C, and/or any other property that uses Tract C as a storm water detention facility, to provide any retention/detention facilities on the Property or Tract C to detain storm water generated by 2- and 10-year storms, unless otherwise required by state or federal law, PROVIDED, however, that during and after said period the City may require DCG to construct any surface water retention / detention required pursuant to state or federal law, or pursuant to any City code, regulation or ordinance required to be adopted by state or federal law. Following the expiration of ten (10) years from the date of this Agreement, or following the first redevelopment of the Property, whichever occurs first, any further redevelopment shall be governed by the provisions of the Federal Way City Code then in effect. For purposes of this paragraph, "redevelopment" shall be defined as the construction or expansion of any structure on DCG Property and/or Tract C (subject to paragraph 2.5), or the addition or replacement of impervious surface, but shall not include exterior cosmetic work with a value of \$120,000.00 or less and as depicted in plans contained in PRE00100466 on file with the City of Federal Way.

This Agreement pertains only to the volume of storm water, as described above, which flows or drains from the Property and any other property that as of the date of this Agreement uses Tract C as a storm water detention facility, assuming the Property and other property using Tract C are fully developed with the maximum allowable amount of impervious surface area. Nothing in this paragraph shall be deemed to relieve DCG, its heirs, successors or assigns, or the owner of any other property from complying with all applicable Federal Way City Code water quality requirements with respect to any use, development or redevelopment of the Property, Tract C, or any other property, at any time.

#### 2.4 Connection of Tract C to Project

The City will include a manhole installation on the City's trunk line in a location suitable to receive a connection from Tract C. The City will reconnect the existing outlet pipe from Tract C into this manhole.

2.5 Tract C Detention Pond Based on the Bush, Roed, and Hitchings Evergreen Plaza Drainage study, dated June 17, 1976, the detention pond in Tract C appears to have been designed to provide only water quantity control, not water quality control. DCG, its heirs, successors or assigns shall comply with all applicable Federal Way City Code water quality requirements with respect to any use, development or redevelopment of the Property, Tract C, or any other property, and DCG understands and acknowledges that the City may require the owner(s) of any other property draining to the Tract C pond to comply with all applicable Federal Way City Code water quality requirements with respect to any use, development or redevelopment of said owners' property. To determine application of Federal Way City Code water quality requirements, Tract C will be treated as a separate from any other property draining to it, from Tracts A and B, or from any other lots or parcels within Short Plat No. 7912270667. In the event that DCG obtains a binding site plan approval from the City of Federal Way to convert Tract C into a separate, legal lot, any improvements to Tract C will require a water quality facility sufficient to serve Tract C and its improvements only, and such improvements upon Tract C will

not constitute the "first redevelopment" for Tracts A or B, or from any other lots or parcels within Short Plat No 7912270667, subject to the provisions of Paragraph 2 3 above, unless development upon Tract C is part of an overall development or redevelopment involving adjacent parcels

2.6 Project Traffic Control During the construction of the storm drainage improvements, at least one lane of traffic will be provided within Tract X at all times

3. Title

3.1 Condition of Title. Title to the Permanent Easement shall be acceptable to the City DCG shall obtain the subordination of all monetary encumbrances or defects which have a prior interest to the City and which, in the City's sole discretion, are unacceptable to the City. If requested by the City, DCG shall, to the extent reasonably practicable, obtain the subordination of all nonmonetary encumbrances or defects which have a prior interest to the City and which in the City's reasonable discretion are unacceptable to the City.

4. Closing

4.1 Closing of the Transfer. This transfer shall be closed on or before May 31, 2000, after the City's notice to DCG of the City's satisfaction of the contingencies set forth in Section 5.1 herein, or at another time agreed to in writing by the parties.

4.2 Closing Agent This sale shall be closed by a closing agent designated by City. The City and DCG shall, immediately upon demand, deposit with closing agent all instruments and monies required to complete the purchase in accordance with this Agreement.

4.3 Closing Costs and Proration. The City shall pay all closing costs, including recording and escrow fees. Taxes for the current year and all rents, interest, utilities and other liens and charges shall be prorated as of closing. The parties shall pay those charges accruing to the date of closing on or before the date of closing.

4.4 Possession. The City shall be entitled to possession of the Property either pursuant to the terms of a possession and use agreement, or at closing, whichever occurs first.

5. Contingencies

5.1 The Contingencies. The City's obligation to accept the Permanent Easement and Tract X, or otherwise perform under this Agreement, are conditioned upon and subject to the City's satisfaction, in its sole discretion, or the City's written waiver of the following contingencies

(a) The City's determination that the soils of the Permanent Easement and/or Tract X, or structures or improvements on the Permanent Easement and/or Tract X, are free from

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any hazardous substances whatsoever DCG shall reasonably cooperate with the City to provide such information that the City requests to the extent that such information or documents exist and are under the control of the DCG, and grant to the City the right to enter the Permanent Easement and/or Tract X at reasonable times upon prior notice to DCG to inspect and obtain necessary samples from the same This contingency is solely for the City's benefit and shall be determined in the exercise of the City's sole discretion;

- (b) Final approval of this Agreement by the City Council of Federal Way;
- (c) The truth and accuracy of all representations by DCG;
- (d) The absence of any violation of federal, state or City laws including without limitation, all City codes, ordinances, resolutions, regulations, standards and policies, as now existing or hereafter adopted or amended, affecting the use, occupancy or condition of the Property;
- (e) DCG's failure to comply with the order of any court or governmental authority or agency pertaining to the Permanent Easement or Tract X, or the use, occupancy or condition of the Permanent Easement or Tract X;
- (f) The pendency or threat of any litigation or proceeding relating to the Permanent Easement or Tract X; or
- (g) Any material change in the Permanent Easement or Tract X, or the improvements on the Permanent Easement or Tract X occurring after the execution of this Agreement.

5.2 Contingency Period. In connection with the hazardous waste contingency contained in Section 4.1(a) herein, the City has forty-five (45) days from the date of the City's receipt of DCG's acceptance of this offer to notify DCG of the City's determination; provided, however, that the City shall have the right to extend this contingency period for thirty (30) days upon notice of such extension from the City to DCG. In connection with all other contingencies, the City shall have until the closing date in which to notify DCG that it has satisfied or waived satisfaction of the contingencies or has elected to terminate this Agreement pursuant to such contingencies.

5.3 Expiration of Contingency Period. If DCG does not receive the notice required by Section 4.2 prior to the closing date, this Agreement shall terminate, at the City's election.

## 6 DCG's Representations and Warranties

6.1 Environmental Conditions. Notwithstanding the contingencies above, it is DCG's obligation at its sole cost and expense to comply or ensure compliance with all federal, state, foreign and local laws or administrative orders with respect to environmental conditions existing on the Property at closing including, without limitation, the Resource Conservation and Recovery Act, the Comprehensive Environmental Response, Compensation and Liability Act, the Spill

Compensation and Control Act, and the Environmental Cleanup Responsibility Act. Such obligation, and any liability that DCG may have for any breach thereof shall survive the closing.

In the event the City discovers or is notified about the existence of any environmental condition (including, without limitation, a spill, discharge or contamination) that existed as of and/or prior to the closing date or any act or omission occurring prior to the closing date, the result of which may require remedial action pursuant to any law or may be the basis for the assertion of any third party claims, including claims of governmental entities, the City shall promptly notify DCG and DCG shall, at its sole cost and expense, proceed with due diligence and in good faith to take the appropriate action and response thereto. In the event that DCG fails to so proceed with due diligence and good faith, the City may, at its option, proceed to take the appropriate action and shall have the rights to indemnity as set forth below.

6.2 No Material Defect. DCG is unaware of any material defect in the Easement Area or Tract X

## 7. Indemnities

7.1 DCG's Indemnities Notwithstanding the City's waiver or satisfaction of any of the contingencies, DCG agrees to indemnify and hold harmless the City, against and in respect of, any and all damages, claims, losses, liabilities, judgments, demands, fees, obligations, assessments, and expenses and costs, including without limitation, reasonable legal, accounting, consulting, engineering and other expenses which may be imposed upon or incurred by the City, or asserted against the City, by any other party or parties (including, without limitation, a governmental entity), arising out of or in connection with: (1) any action on, in or affecting the Easement Area by DCG or its agents or tenants prior or subsequent to closing, except to the extent caused by the negligence of the City; and/or (2) any environmental condition existing on the Property as of and/or prior to the closing date, including the exposure of any person to any such environmental condition, regardless of whether such environmental condition or exposure resulted from activities of DCG or its predecessors in interest. These indemnities shall survive closing and be in addition to DCG's obligation for breach of a representation or warranty as may be set forth herein

7.2 City's Indemnities The City agrees to indemnify and hold harmless DCG, against and in respect of, any and all damages, claims, losses, liabilities, judgments, demands, fees, obligations, assessments, and expenses and costs, including without limitation, reasonable legal, accounting, consulting, engineering and other expenses (except consequential economic damages) which may be imposed upon or incurred by DCG, or asserted against the DCG, by any other party or parties (including, without limitation, a governmental entity), arising out of the City's work on the Project on the Property, except to the extent caused by the negligence of DCG. This indemnity shall survive closing.

8. Notice Any notice made pursuant to this Agreement, must be in writing, signed by the City Manager or designee or the DCG and delivered to the City or the DCG at their

respective addresses set forth below. Facsimile transmission of any signed original document shall not be the same as transmission of an original.

9 **General Conditions**

9.1 **Performance.** Time is of the essence to this Agreement.

9.2 **Entire Agreement.** This Agreement contains all of the agreements of the parties with respect to any matter covered or mentioned in this Agreement and no prior agreements or understandings pertaining to any such matters shall be effective for any purpose

9.3 **Modification.** No provision of this Agreement may be amended or added to except by agreement in writing signed by the parties

9.4 **Full Force and Effect.** Any provision of this Agreement which is declared invalid, void or illegal shall in no way affect, impair, or invalidate any other provision hereof and such other provisions shall remain in full force and effect

9.5 **Governing Law** This Agreement shall be made in and shall be governed by and interpreted in accordance with the laws of the State of Washington

9.6 **Captions.** The respective captions of the paragraphs of this Agreement are inserted for convenience of reference only and shall not be deemed to modify or otherwise affect in any respect any of the provisions of this Agreement.

10. **Survival of Warranties.** The terms, covenants, representations and warranties contained in this Agreement shall not merge in the Deed, but shall survive closing

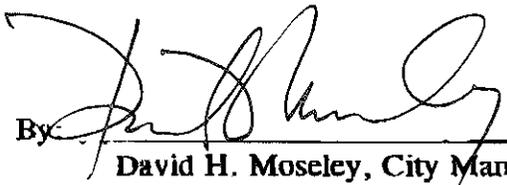
11. **Covenants and Easements to Run With Land.** The terms, covenants, easements and agreements contained within Paragraphs 1.1 and 1.2 are intended to and shall be benefits and servitudes upon the Property and shall run with the land and bind and inure to the benefit of the parties hereto, their respective heirs, personal representatives, tenants, successors, and/or assigns. This Agreement, the Permanent Easement provided for by Paragraph 1.1, and the Statutory Warranty Deed provided for by Paragraph 1.2 shall be recorded with the King County Auditor in King County, Washington.

12. **Termination of Agreement** The City offers to purchase the Permanent Easement on the terms and conditions set forth herein. In the event the Owner does not accept this offer on or before May 16, this offer shall expire and terminate

Dated this 24<sup>th</sup> day of May, 2000

CITY: CITY OF FEDERAL WAY

2002 037 6002343  
2002 032 6002343

By:   
David H. Moseley, City Manager  
33530 1st Way South  
Federal Way, WA 98003  
(253) 661-4013

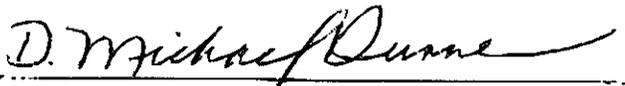
APPROVED AS TO FORM:

  
Londi K. Lindell, City Attorney

Owner's Acceptance. DCG agrees to sell and transfer the Permanent Easement according to the terms and conditions in this Agreement. DCG acknowledges receipt of a copy of this Agreement on May 24, 2000 signed by all parties, and acknowledges having read the terms and conditions herein

OWNER (Corporate):

DCG II LLC

By:   
(signature)

D. Michael Dunne  
(typed/printed name)

Managing partner  
(title)

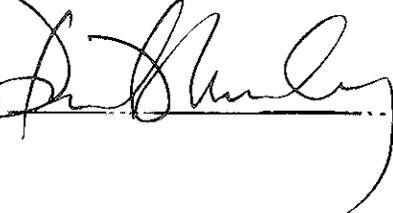
25022 104th Ave SE Ste B  
Kent, WA 98031  
(Address)

(253) 852-6400  
(Phone)

2002 032 6002363

City's Receipt. The City acknowledges receipt of an Owner's signed copy of this Agreement on May 24, 2000.

CITY OF FEDERAL WAY

By. 

K USEATACPI AZAISEATPLAZ AGR

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**EXHIBIT A  
TO EASEMENT AGREEMENT  
DCG PROPERTY LEGAL DESCRIPTION**

Lots 1 and 2, King County Short Plat Number 1079107, recorded under Recording Number 7912270667, said short plat being known as Tract A, Evergreen Plaza, according to the plat thereof recorded in volume 100 of Plats, pages 74 and 75, in King County, Washington;

AND Tract B, Evergreen Plaza, according to the plat thereof recorded in Volume 100 of Plats, pages 74 and 75, in King County, Washington

2002 032 6002343

**EXHIBIT A  
TO EASEMENT AGREEMENT  
DCG PROPERTY LEGAL DESCRIPTION**

Lots 1 and 2, King County Short Plat Number 1079107, recorded under Recording Number 7912270667, said short plat being known as Tract A, Evergreen Plaza, according to the plat thereof recorded in volume 100 of Plats, pages 74 and 75, in King County, Washington;

AND Tract B, Evergreen Plaza, according to the plat thereof recorded in Volume 100 of Plats, pages 74 and 75, in King County, Washington.

2002 032 6 (2343

Recording Requested By

SeaTac Plaza Corporation

When Recorded Mail To

CITY OF FEDERAL WAY  
ATT Legal Department  
P O Box 9718  
Federal Way, WA 98063

EXHIBIT "B" TO EASEMENT PURCHASE AND SALE AGREEMENT

**PERMANENT AND TEMPORARY CONSTRUCTION EASEMENT FOR SURFACE  
WATER FACILITIES**

Grantor (s) DCG II LLC

Grantee (s) CITY OF FEDERAL WAY

Property Legal Description (abbreviated) Lot 2, King County Short Plat Number 1079107, Tract B of the Plat of Evergreen Plaza, Vol 100 of Plats, Pages 74-75 in King County, Washington  
Easement Legal Descriptions (abbreviated) The West 30 feet of Lot 2 of King County Short Plat 1079107, together with West 30 feet of Tract B of the Plat of Evergreen Plaza as recorded in Volume 100 of Plats at page 74 and 75 (Permanent Easement), North 30 feet of Lot 2 of King County Short Plat 1079107 (Temporary Construction Easement) Entire Legal(s) on Exhibits A and B, pages 4 and 6  
Assessor's Tax Parcel ID#(s) 2423200050 and 2423200060

2002 032 6002343

**1. Grant of Permanent Easement.** DCG II LLC, a Washington limited liability corporation ("Grantor"), owns certain real property (the "Servient Property") located in Federal Way, Washington, legally described as follows

Lot 2, King County Short Plat Number 1079107, recorded under Recording Number 7912270667, in King County, Washington

AND Tract B, Evergreen Plaza, according to the plat thereof recorded in Volume 100 of Plat, page 74 and 75, in King County, Washington

For and in consideration of Ten Dollars (\$10 00) and other valuable consideration, the receipt of which is hereby acknowledged, Grantor grants, conveys and warrants to the CITY OF FEDERAL WAY, a Washington municipal corporation ("Grantee") for the purposes hereinafter set forth a

permanent, perpetual easement ("the Permanent Easement") under, across and over that portion of the Servient Property legally described in Exhibit 1 and depicted on Exhibit 2, both of which are attached hereto and incorporated herein by this reference

**2. Purpose of Easement.** The purpose of the Easement is to allow Grantee to construct, reconstruct, operate, maintain, repair, replace, remove, grade, and excavate surface water facilities ("Facilities") within the Easement. Grantee and its agents, designees and/or assigns shall have the right, without prior notice to Grantor, at such times as deemed necessary by Grantee, to enter upon the Property in furtherance of the purposes of the Easement described herein

**3. Access.** Grantee shall have the right of access to the Easement over and across the improved driveways and parking lot existing on the Servient Property, or by any other method mutually agreeable to Grantor and Grantee, to enable Grantee to exercise the rights granted hereunder by utilizing the improved driveway existing on the Servient Property. Grantee agrees to keep Grantor informed as to the routes of access utilized under this paragraph

**4. Obstructions; Landscaping.** Grantee may remove vegetation, trees, or other obstructions within the Easement, and may level and grade the Easement to the extent reasonably necessary to carry out the purposes set forth in Paragraph 2 hereof, provided, that following any such work, Grantee shall, to the extent reasonably practicable, restore the Easement to a condition similar to its condition prior to such work

**5. Grantor's Use of Permanent Easement.** The Permanent Easement shall be exclusive to Grantee, provided, however, Grantor reserves the right to use the Easement for any purpose not inconsistent with Grantee's rights provided further, that Grantor shall not construct or maintain any buildings or other structures on the Permanent Easement, that Grantor shall not perform grading or other form of construction activity on the Property, which would alter the functioning of the Facilities, and that Grantor shall not blast within fifteen (15) feet of the Easement

**6. Grant of Temporary Easement.** Grantor also grants, conveys and warrants to Grantee a temporary construction easement (the "Temporary Easement") under, across and over certain real property legally described in Exhibit 3 hereto and depicted on Exhibit 2, both of which are attached hereto and incorporated herein by this reference. The Temporary Easement is to provide additional property for use during construction of the Facilities, including but not limited to stockpiling of supplies and equipment storage. The Temporary Easement shall remain in effect from the date of this Easement document through construction and until such time the Facilities have been accepted for operation by the Grantor

**7. Successors and Assigns.** The terms of this Permanent Easement, and the rights and obligations of the Grantor and Grantee provided herein, are intended to and shall be benefits and servitudes upon the Servient Property and shall run with the land and bind and inure to the benefit of the parties hereto, their respective heirs, personal representatives, tenants, successors, heirs and/or assigns

2002 032 E R 2343

DATED THIS 2 day of November, 2001.

GRANTOR  
DCG II LLC

By D. Michael Dunne  
(Signature)

D Michael Dunne  
(Type/printed name)

Managing Partner  
(Title)

[Corporate Notary]

STATE OF )  
) ss.  
COUNTY OF )

On this day personally appeared before me D. Michael Dunne,  
to me known to be the managing partner of  
DCG II LLC, the corporation that executed the  
foregoing instrument, and acknowledged the said instrument to be the free and voluntary act and  
deed of said corporation, for the uses and purposes therein mentioned, and on oath stated that  
he/she was authorized to execute said instrument and that the seal affixed, if any, is the corporate  
seal of said corporation

GIVEN my hand and official seal this 2 day of November, 2001

Delane Hand  
Delane Hand  
(typed/printed name of notary)

Notary Public in and for the State of Washington  
My commission expires 9-19-04

APPROVED AS TO FORM:

By Bob C Sterbank  
Bob C Sterbank, City Attorney



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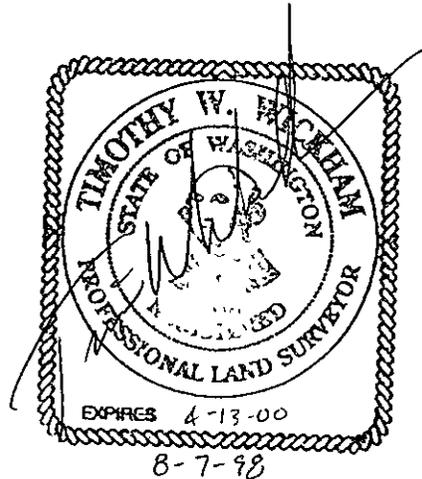
**PERMANENT EASEMENT LEGAL DESCRIPTION**

THAT PORTION OF TRACT B OF THE PLAT OF EVERGREEN PLAZA AS RECORDED IN VOLUME 100 OF PLATS AT PAGE 74 AND 75 , RECORDS OF KING COUNTY, WASHINGTON, DESCRIBED AS FOLLOWS

BEGINNING AT THE SOUTHWEST CORNER OF SAID TRACT B, SAID CORNER ALSO BEING THE SOUTHWEST CORNER OF SAID PLAT, THENCE NORTH 00°18'15" EAST ALONG THE WEST LINE OF SAID TRACT B, 318 00 FEET TO THE NORTHWEST CORNER OF SAID TRACT B, THENCE SOUTH 89°34'08" EAST ALONG THE NORTH LINE OF SAID TRACT B, 30 00 FEET, THENCE SOUTH 00°18'15" WEST, 318 00 TO THE SOUTH LINE OF SAID TRACT B; THENCE NORTH 89°34'08" WEST ALONG SAID SOUTH LINE , 30 00 FEET TO THE POINT OF BEGINNING

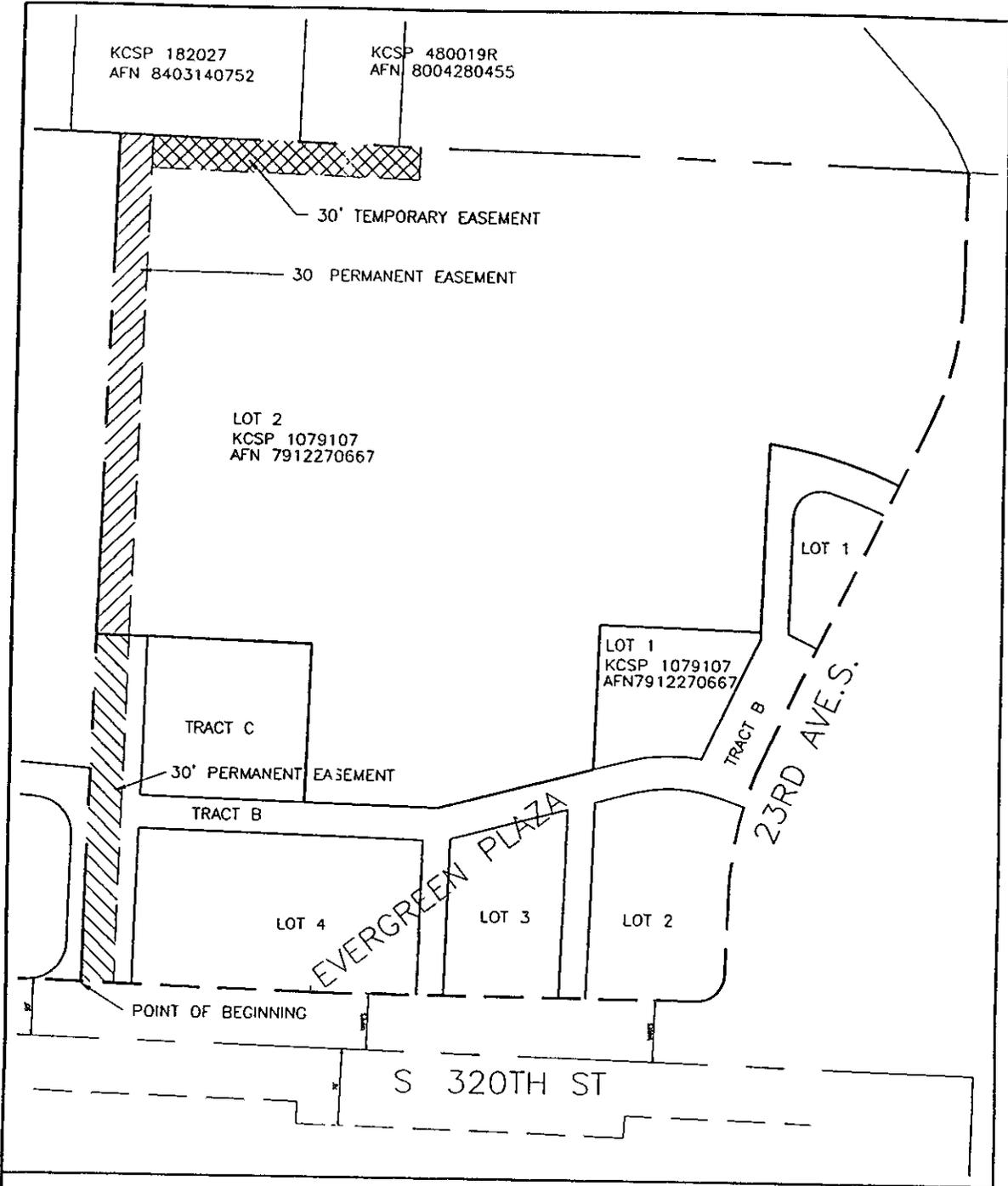
TOGETHER WITH THE WEST 30 FEET OF LOT 2 OF KING COUNTY SHORT PLAT 1079107 AS RECORDED UNDER RECORDING NUMBER 7912270667, RECORDS OF KING COUNTY, WASHINGTON

CONTAINING 23,250 SQUARE FEET



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2002 032 602343



PERMANENT AND TEMPORARY EASEMENTS

DATE AUGUST 7, 1998

ACAD No 1497REC

E A R T H T E C H



100 W Broadway  
 Ste 5000  
 Long Beach CA 90802-4443  
 310 495-4449

10800 NE 8th St  
 7th Floor  
 Bellevue WA 98004  
 206 455-9494

720 S 333 St Ste 200  
 Federal Way WA 98003  
 206 838-6202

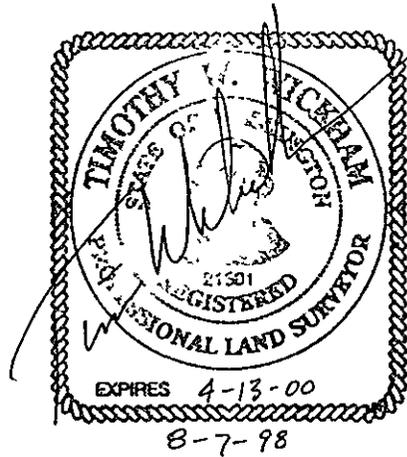
1200 Dupont St Ste 2-B  
 Bellingham WA 98225  
 360 734-3202

TEMPORARY EASEMENT LEGAL DESCRIPTION

THE NORTH 30 FEET OF THE EAST 245 50 FEET OF THE WEST 275 50 FEET OF LOT 2 OF KING COUNTY SHORT PLAT 1079107 AS RECORDED UNDER RECORDING NUMBER 7912270667, RECORDS OF KING COUNTY, WASHINGTON

CONTAINING 7365 SQUARE FEET

2002 032 6002343



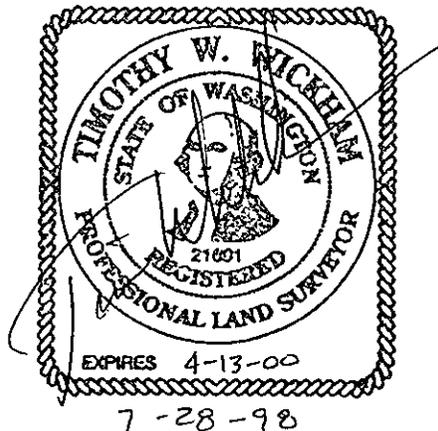
TRACT X

THAT PORTION OF TRACT B OF THE PLAT OF EVERGREEN PLAZA AS RECORDED IN VOLUME 100 OF PLATS AT PAGE 74 AND 75 , RECORDS OF KING COUNTY, WASHINGTON, DESCRIBED AS FOLLOWS

BEGINNING AT THE SOUTHWEST CORNER OF SAID TRACT B, SAID CORNER ALSO BEING THE SOUTHWEST CORNER OF SAID PLAT, THENCE NORTH 00°18'15" EAST ALONG THE WEST LINE OF SAID TRACT B, 318 00 FEET TO THE NORTHWEST CORNER OF SAID TRACT B, THENCE SOUTH 89°34'08" EAST ALONG THE NORTH LINE OF SAID TRACT B, 46 88 FEET TO THE NORTHEAST CORNER OF SAID TRACT B; THENCE SOUTH 00°25'52" WEST, 318 00 TO THE SOUTH LINE OF SAID TRACT B, THENCE NORTH 89°34'08" WEST ALONG SAID SOUTH LINE , 46.18 FEET TO THE POINT OF BEGINNING

TOGETHER WITH THE WEST 30 FEET OF LOT 2 OF KING COUNTY SHORT PLAT 1079107 AS RECORDED UNDER RECORDING NUMBER 7912270667, RECORDS OF KING COUNTY, WASHINGTON CONTAINING 28,506 SQUARE FEET

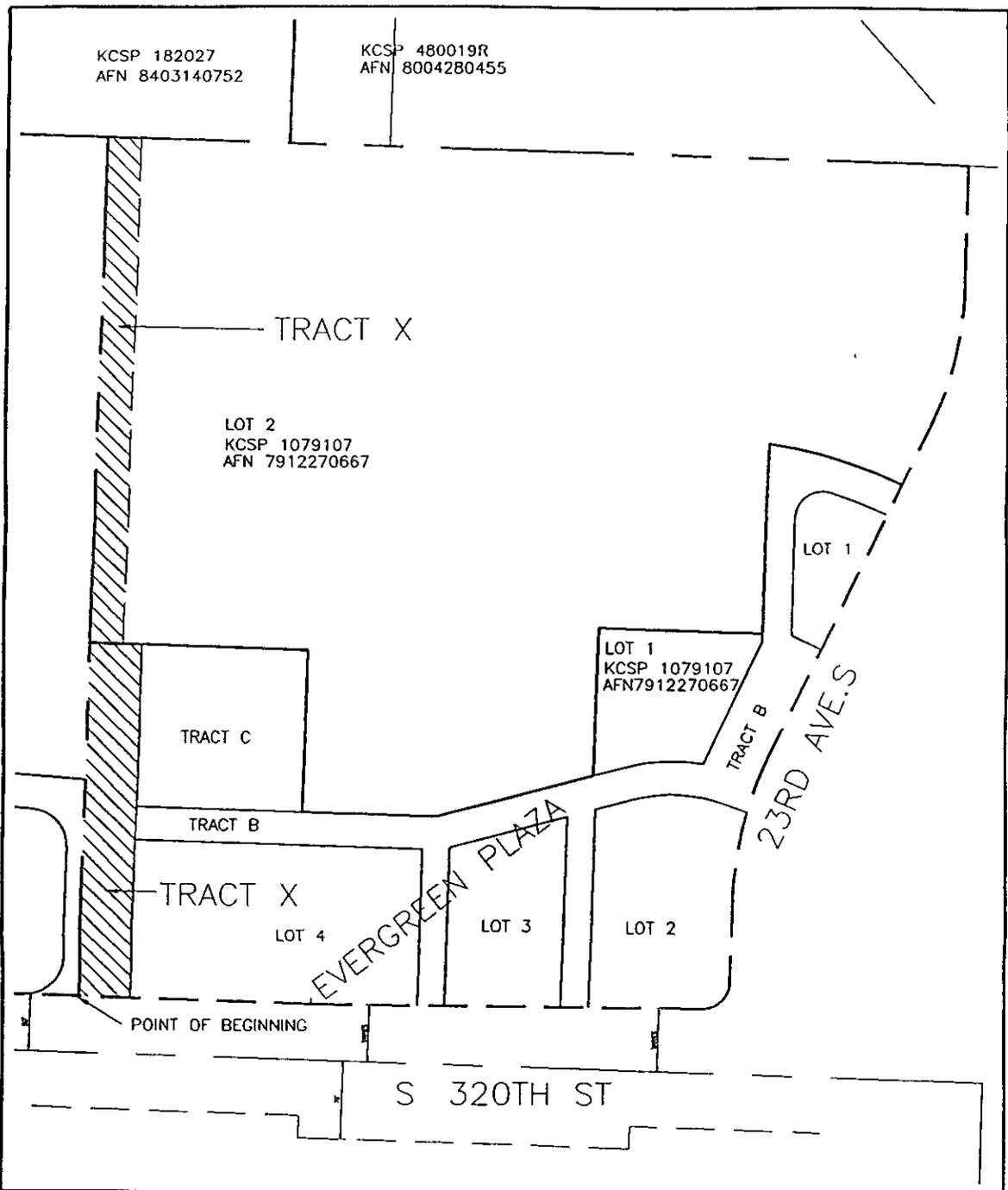
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2002 032 6002343



**EXHIBIT**           C

# EXHIBIT D

2002 032 8002343



DATE JULY 28, 1998

TRACT X

ACAD No 1497REC

E	A	R	T	H		T	E	C	H
100 W Broadway Ste 5000 Long Beach CA 90802-4443 310 495-4449	10800 NE 8th St 7th Floor Bellevue WA 98004 206 455-9494	720 S 333 St Ste 200 Federal Way WA 98003 206 838-6202	1200 Dupont St Ste 2-B Bellingham WA 98225 360 734-3202						

Return Address

City of Federal Way  
Attn Law Dept  
P.O Box 9718  
Federal Way, WA 98063

EXHIBIT "E" TO EASEMENT PURCHASE AND SALE AGREEMENT

STATUTORY WARRANTY DEED

Grantor. DCG II LLC

Grantee CITY OF FEDERAL WAY

Property Legal Description (abbreviated) West 30 feet of Lot 2 of King County Short Plat 1079107, together with approximately the West 46.88 feet of Tract B of the Plat of Evergreen Plaza as recorded in Volume 100 of Plats, pages 74-75 Additional Legals on Exhibit A Assessor's Tax Parcel ID#(s) 2423200050 and 2423200060

THE GRANTOR, DCG II LLC, a Washington limited liability corporation, for and in consideration of One Dollar (\$1 00), and under the threat of the exercise of eminent domain, conveys and warrants to the CITY OF FEDERAL WAY, a Washington municipal corporation, the real property described in Exhibit "A" herewith attached and made a part hereof, and any after-acquired interest therein, situated in King County in the State of Washington

DATED THIS 2 day of November, 2001

GRANTOR

DCG II LLC

By D. Michael Dunne  
(signature)

D. Michael Dunne  
(typed/printed name)

Managing Partner  
(title)

2002 032 6002363



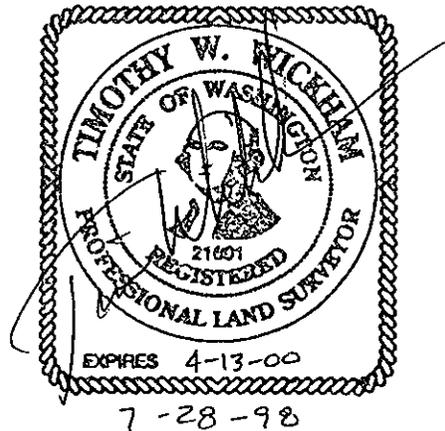
TRACT X

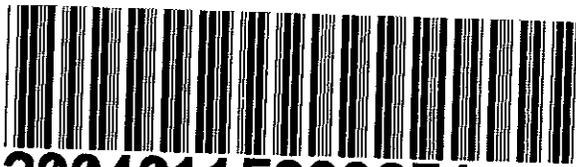
THAT PORTION OF TRACT B OF THE PLAT OF EVERGREEN PLAZA AS RECORDED IN VOLUME 100 OF PLATS AT PAGE 74 AND 75 , RECORDS OF KING COUNTY, WASHINGTON, DESCRIBED AS FOLLOWS

BEGINNING AT THE SOUTHWEST CORNER OF SAID TRACT B, SAID CORNER ALSO BEING THE SOUTHWEST CORNER OF SAID PLAT, THENCE NORTH 00°18'15" EAST ALONG THE WEST LINE OF SAID TRACT B, 318 00 FEET TO THE NORTHWEST CORNER OF SAID TRACT B, THENCE SOUTH 89°34'08" EAST ALONG THE NORTH LINE OF SAID TRACT B, 46 88 FEET TO THE NORTHEAST CORNER OF SAID TRACT B, THENCE SOUTH 00°25'52" WEST, 318.00 TO THE SOUTH LINE OF SAID TRACT B, THENCE NORTH 89°34'08" WEST ALONG SAID SOUTH LINE , 46 18 FEET TO THE POINT OF BEGINNING

TOGETHER WITH THE WEST 30 FEET OF LOT 2 OF KING COUNTY SHORT PLAT 1079107 AS RECORDED UNDER RECORDING NUMBER 7912270667, RECORDS OF KING COUNTY, WASHINGTON

CONTAINING 28,506 SQUARE FEET





20040115000654

PUGET SOUND EN EAS 21 00  
PAGE 001 OF 003  
01/15/2004 10 31  
KING COUNTY, WA

**RETURN ADDRESS:**

Puget Sound Energy, Inc  
Attn: R/W Department  
PO Box 90868, GEN-03E  
Bellevue, WA 98009-0868

**ORIGINAL**

**EASEMENT**

REFERENCE #:

GRANTOR DCG II, LLC  
GRANTEE PUGET SOUND ENERGY, INC.  
SHORT LEGAL SW ¼ Sec. 9, Twp. 21N, Rg. 04E, W. M.  
ASSESSOR'S PROPERTY TAX PARCEL. 242320-0060

For and in consideration of One Dollar (\$1.00) and other valuable consideration in hand paid, **DCG II, LLC**, a Washington limited liability company (Grantor herein), hereby conveys and warrants to **PUGET SOUND ENERGY, INC.**, a Washington corporation (Grantee herein), for the purposes hereinafter set forth, a nonexclusive perpetual easement over, under, along, across, and through the following described real property ("Property" herein) in King County, Washington

**TRACT B, EVERGREEN PLAZA, A PLANNED UNIT DEVELOPMENT, ACCORDING TO THE PLAT THEREOF, RECORDED IN VOLUME 100, OF PLATS, PAGES 74 AND 75, IN KING COUNTY, WASHINGTON.**

Except as may be otherwise set forth herein Grantee's rights shall be exercised upon that portion of the Property ("Easement Area" herein) described as follows

An Easement Area \_\_\_\_\_ foot in width having \_\_\_\_\_ feet of such width on each side of a centerline described as follows:

**A STRIP OF LAND 10 FEET IN WIDTH MEASURED AT RIGHT ANGLES FROM THE SOUTH LINE OF THE ABOVE-DESCRIBED TRACT; BEGINNING AT A POINT SIXTY (60) FEET EAST OF THE SOUTHWEST CORNER OF SAID TRACT AND EXTENDING A DISTANCE OF 195 FEET.**

*SEE ATTACHED SITE PLAN (MA)*

**1. Purpose.** Grantee shall have the right to construct, operate, maintain, repair, replace, improve, remove, enlarge, and use the easement area for one or more utility systems for purposes of transmission, distribution and sale of electricity. Such systems may include, but are not limited to

**Underground facilities.** Conduits, lines, cables, vaults, switches and transformers for electricity, fiber optic cable and other lines, cables and facilities for communications; semi-buried or ground-mounted facilities and pads, manholes, meters, fixtures, attachments and any and all other facilities or appurtenances necessary or convenient to any or all of the foregoing

Following the initial construction of all or a portion of its systems, Grantee may, from time to time, construct such additional facilities as it may require for such systems. Grantee shall have the right of access to the Easement Area over and across the Property to enable Grantee to exercise its rights hereunder. Grantee shall compensate Grantor for any damage to the Property caused by the exercise of such right of access by Grantee

**2. Easement Area Clearing and Maintenance.** Grantee shall have the right to cut, remove and dispose of any and all brush, trees or other vegetation in the Easement Area. Grantee shall also have the right to control, on a continuing basis and by any prudent and reasonable means, the establishment and growth of brush, trees or other vegetation in the Easement Area

**3. Grantor's Use of Easement Area.** Grantor reserves the right to use the Easement Area for any purpose not inconsistent with the rights herein granted, provided, however, Grantor shall not construct or maintain any buildings, structures or other objects on the Easement Area and Grantor shall do no blasting within 300 feet of Grantee's facilities without Grantee's prior written consent

**4. Indemnity.** Grantee agrees to indemnify Grantor from and against liability incurred by Grantor as a result of Grantee's negligence in the exercise of the rights herein granted to Grantee, but nothing herein shall require Grantee to indemnify Grantor for that portion of any such liability attributable to the negligence of Grantor or the negligence of others.

DCG II, LLC  
WO# 105026142 / OFN 45544

**5. Abandonment.** The rights herein granted shall continue until such time as Grantee ceases to use the Easement Area for a period of five (5) successive years, in which event, this easement shall terminate and all rights hereunder, and any improvements remaining in the Easement Area, shall revert to or otherwise become the property of Grantor, provided, however, that no abandonment shall be deemed to have occurred by reason of Grantee's failure to initially install its systems on the Easement Area within any period of time from the date hereof

**6. Successors and Assigns.** Grantee shall have the right to assign, apportion or otherwise transfer any or all of its rights, benefits, privileges and interests arising in and under this easement. Without limiting the generality of the foregoing, the rights and obligations of the parties shall inure to the benefit of and be binding upon their respective successors and assigns

DATED this 16 day of DEC, 2003.

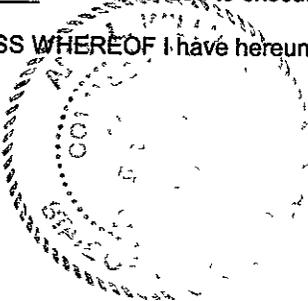
GRANTOR.  
DCG II, LLC, a Washington limited liability company

BY D Michael Dunne  
ITS MANAGING MEMBER

STATE OF WASHINGTON )  
  ) SS  
COUNTY OF KING

On this 16 day of December, 2003, before me, the undersigned, a Notary Public in and for the State of Washington, duly commissioned and sworn, personally appeared D Michael Dunne, to me known to be the person who signed as Managing Partner, of DCG II, LLC, the limited liability company that executed the within and foregoing instrument, and acknowledged said instrument to be his free and voluntary act and deed and the free and voluntary act and deed of DCG II, LLC for the uses and purposes therein mentioned; and on oath stated that he was authorized to execute the said instrument on behalf of said DCG II, LLC

IN WITNESS WHEREOF I have hereunto set my hand and official seal the day and year first above written.



Amy L Williams  
(Signature of Notary)

Amy L Williams  
(Print or stamp name of Notary)

NOTARY PUBLIC in and for the State of Washington,  
residing at Port WA 98032  
My Appointment expires 8/29/04

Notary seal, text and all notations must be inside 1" margins

SERIAL NO.  
COMPANY ID NO.

PANEL SIZE: 200 AMP  
EST. DEMAND: 44 KW  
SQ FEET: 600  
HEAT TYPE: ELECTRIC  
%V FLICKER: <2 %  
L.R.C: 260 AMPS  
THE SECONDARY FAULT CURRENT IS 3300 AMPS

EVERGREEN PLAZA

311879  
TLZ 163548  
120-208

TRACT 'B'

1/0 15KV UG PRI

+ 250

311863  
TLZ 163502

311861  
163501

DENNY'S

311861  
163521

QZ INSTALL

ARCO  
"2200"

311850 LX  
163524

BANK

311854  
TLZ 163550  
120/208

31  
16

V02

V03

V01

A

100T

P01

311850  
163495

S. 320TH STREET

214  
35

214  
62

**Return Address:**  
**Attn: Don Vogt**  
**Central Puget Sound Regional Transit Authority**  
**401 S. Jackson**  
**Seattle, WA 98104**



**20040316001735**

PHAROS CORP EAS 24 00  
 PAGE 001 OF 006  
 03/16/2004 13 48  
 KING COUNTY, WA

Please print or type information **WASHINGTON STATE RECORDER'S Cover Sheet** (RCW 65.04)

<p><b>Document Title(s)</b> (or transactions contained therein) (all areas applicable to your document <b>must</b> be filled in)</p> <p>1 TEMPORARY CONSTRUCTION EASEMENT</p>
<p><b>Reference Number(s) of Documents assigned or released:</b> NONE</p> <p>Additional reference #'s on page <u>  N/A  </u> of document</p>
<p><b>Grantor(s)</b> (Last name, first name, initials)</p> <p>1 DCG II, LLC, a Washington limited liability company</p>
<p><b>Grantee(s)</b> (Last name first, then first name and initials)</p> <p>1 CENTRAL PUGET SOUND REGIONAL TRANSIT AUTHORITY, a regional transit authority of the State of Washington</p>
<p><b>Legal description</b> (abbreviated i.e. lot, block, plat or section, township, range)</p> <p>LOT 6 OF FEDERAL WAY AMENDED EVERGREEN PLAZA BINDING SITE PLAN          FILE NO 02-102953-SU</p> <p>Additional legal is on EXHIBIT A of document</p>
<p><b>Assessor's Property Tax Parcel/Account Number</b> <input type="checkbox"/> Assessor Tax # not yet assigned</p> <p>242320-0050-00</p>
<p>The Auditor/Recorder will rely on the information provided on the form. The staff will not read the document to verify the accuracy or completeness of the indexing information provided herein.</p>

I am requesting an emergency nonstandard recording for an additional fee as provided in RCW 36.18.010. I understand that the recording processing requirements may cover up or otherwise obscure some part of the text of the original document.

  N/A  

Signature of Requesting Party

**EXCISE TAX NOT REQUIRED**

King Co. Records Division

By   P. Henner   Deputy

Document Title **TEMPORARY CONSTRUCTION EASEMENT**  
 Grantor **DCG II, LLC,**  
**a Washington limited liability company**  
 Grantee **CENTRAL PUGET SOUND REGIONAL TRANSIT AUTHORITY,**  
**a regional transit authority of the State of Washington**  
 Reference Nos **None**  
 Abbrev Legal: **LOT 6 OF FEDERAL WAY AMENDED EVERGREEN PLAZA**  
**BINDING SITE PLAN FILE NO. 02-102953-SU**  
 Additional Lgl **None**  
 Assessor's No **242320-0050-00**

IN THE MATTER OF: Federal Way Transit Center

GRANTOR, DCG II, LLC, a Washington limited liability company, for valuable consideration, in lieu of and subject to condemnation, for public use, hereby grants to GRANTEE, Central Puget Sound Regional Transit Authority, a regional transit authority of the State of Washington, a temporary <sup>NON-EXCLUSIVE</sup> exclusive easement with options to renew, across, along, in and upon that portion of Grantor's property described in Exhibit A hereto attached and by this reference incorporated herein, for the purpose of facilitating construction on the adjacent north property line. After completion of construction or any subsequent entry, Grantee shall restore the affected area as near as may be to its condition immediately before such construction or entry. The easement shall commence upon five days notice from Grantee to Grantor and shall expire six (6) months thereafter GRANTEE reserves the right to renew said easement, upon written notification, up to three (3) additional, intermittent, 1-month periods at \$1,666 66 per renewal period This Temporary Construction Easement contains an area of 7,514 square feet more or less

It is understood and agreed that any construction equipment stored in the easement area overnight shall be stored near the west end of the easement.

It is further understood and agreed that construction shall take place in a manner which minimizes the impact to tenants on the DCG II, LLC property

Grantee does hereby release, indemnify and promise to defend and save Grantor harmless from and against any and all liability, loss, damage, expense, actions and claims, including costs and reasonable attorney's fees incurred by Grantor in defense thereof, resulting or arising directly or indirectly on account of or out of acts or omissions of the Grantee or its servants, agents, employees or contractors in the exercise of the rights granted herein, provided, however, this paragraph does not indemnify Grantor against liability for damages arising out of bodily injury to persons or damage to property caused by or resulting from the negligence of Grantor or Grantor's agents or employees

This temporary construction easement may be assigned by Grantee, and shall be binding upon Grantee's successors and assigns

Dated this 16 day of DEC, 2003

GRANTOR. DCG II, L.L.C.,  
a Washington limited liability company

By: *D Michael Denn*

Its MANAGING MEMBER

Accepted and Approved:

GRANTEE: CENTRAL PUGET SOUND REGIONAL TRANSIT AUTHORITY,  
a regional transit authority of the State of Washington

By: *Agnès Eovern*  
AGNES EOVERN

Its Chief Administrative Officer  
INTERIM

Approved as to form

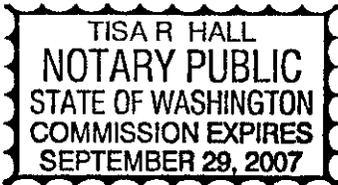
By *Beltanya*  
Sound Transit Legal Counsel

STATE OF WASHINGTON )  
 ) ss  
COUNTY OF KING )

I certify that I know or have satisfactory evidence that the person appearing before me and making this acknowledgment is the person whose true signature appears on this document.

On this 10<sup>th</sup> day of February, 2003, before me personally appeared Joann H Francis, to me known to be the Chief Administrative Officer of the Central Puget Sound Regional Transit Authority, a regional transit authority of the State of Washington, the authority that executed the within and foregoing instrument, and acknowledged the said instrument to be the free and voluntary act and deed of said regional transit authority, for the uses and purposes therein mentioned, and on oath stated that she was authorized to execute said instrument.

WITNESS my hand and official seal hereto affixed the day and year first above written



*[Handwritten Signature]*

Notary Public in and for the State of Washington, residing at Federal Way, WA  
My commission expires: 9/29/2007

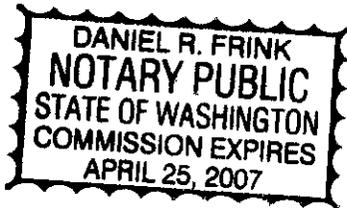
TISA R Hall  
Notary Name

STATE OF WASHINGTON )  
 ) ss.  
COUNTY OF KING )

I certify that I know or have satisfactory evidence that the person appearing before me and making this acknowledgment is the person whose true signature appears on this document

On this 16<sup>th</sup> day of December, 2003, before me personally appeared D. Michael Dunne, to me known to be the Managing Member of DCG II, LLC, a Washington limited liability company that executed the within and foregoing instrument, and acknowledged the said instrument to be the free and voluntary act and deed of said limited partnership, for the uses and purposes therein mentioned, and on oath stated that he/she was authorized to execute said instrument.

WITNESS my hand and official seal hereto affixed the day and year first above written



Daniel R. Frink  
Notary Public in and for the State of WASHINGTON  
residing at Kenmore  
My commission expires 04/25/2007  
Daniel R. Frink  
Print name

**EXHIBIT A**

THE NORTH 10 00 FEET OF LOT 6 OF FEDERAL WAY AMENDED EVERGREEN  
PLAZA BINDING SITE PLAN FILE NO 02-102953-SU, REC. NO. 20030909000708  
KING COUNTY, WASHINGTON

TEMPORARY CONSTRUCTION EASEMENT AREA CONTAINING 7,514 SQUARE  
FEET, MORE OR LESS

8.60

DEC-27-79 100750 7912270667 - D MF

S. 9 T. 21 R. 4

SHORT PLAT NO 1079107

KING COUNTY, WASHINGTON

This space reserved for recorder's use

APPROVAL

Department of Planning and Community Development  
Building and Land Development Division

Examined and approved this 21 day of

December, 1979  
Edward B. Sandberg  
Manager, Building & Land Development Division

Department of Public Works

Examined and approved this 18<sup>th</sup> day of

December, 1979  
Paul C. Hooper  
Director

Filed for record at the request of:

SEA-TAC PLAZA  
Name

Department of Assessments

Examined and approved this 17, day of

DECEMBER, 1979  
HARLEY H. HOPPE  
Assessor  
O. Muel  
Deputy Assessor SW 9-21-4 jry

Return to:  
Building & Land Development  
450 KC Administration Bldg  
Seattle, Washington 98104

Recording Number

LEGAL DESCRIPTION

TRACT A, PLAT OF EVERGREEN PLAZA, AS RECORDED IN VOLUME 100 OF PLATS, PAGES 74 AND 75, RECORDS OF KING COUNTY, WASHINGTON.

RECORDED THIS DAY  
Dec 27 3 57 PM '79  
BY THE CLERK OF  
RECORDS & ELECTIONS  
KING COUNTY

SE 1/4 of SW 1/4 9-21-4  
Acct # 242320-0050  
Map on File in Vault  
C21647A



DECLARATION:

Know all men by these presents that we, the undersigned, owners in fee simple (and contract purchaser(s)) of the land herein described do hereby make a short subdivision thereof pursuant to RCW 58.17.060 and declare this short plat to be the graphic representation of same, and that said short subdivision is made with the free consent and in accordance with the desire of the owners.  
In witness whereof we have set our hands and seals.

SEA-TAC PLAZA,  
a Washington limited partnership  
BY: THE RAINIER FUND,  
General Partner

[Signature]  
Hank Gordon, partner  
[Signature]  
Robert M. Parks, partner

AETNA LIFE INSURANCE COMPANY,  
a Connecticut insurance corporation

[Signature]  
Its: VICE PRESIDENT

BY: METROPOLITAN BUILDING CORPORATION  
General Partner

[Signature]  
Douglas L. Rogers, President  
Its: President

7912270667

STATE OF WASHINGTON S.S.  
County of King

On this day personally appeared before me Hank Gordon, partner & Robert M. Parks, partner of The Rainier Fund to me known to be the individuals described in and who executed the within and foregoing instrument and acknowledged that they signed the same as their free and voluntary act and deed, for the uses and purposes therein mentioned.

Witness my hand and official seal this 8th day of October, 1979.

[Signature]  
Notary Public in and for the State of  
Washington  
Residing at Kirkland

STATE OF WASHINGTON S.S.  
County of King

On this day personally appeared before me Douglas L. Rogers, President and \_\_\_\_\_

of the Metropolitan Building Corporation, a Washington Corporation, to me known to be the individuals described in and who executed the within and foregoing instrument, and acknowledged that they signed and sealed the same as his voluntary act and deed for the uses and purposes therein mentioned and on oath stated that they are authorized to execute the said instrument and that the seal affixed is the corporate seal of said corporation.

Witness my hand and official seal this 8th day of October, 1979.

[Signature]  
Notary Public in and for the State of  
Washington  
Residing at Kirkland

STATE OF CONNECTICUT  
County of Hartford s.s. Hartford

On this day personally appeared before me John B. Walsh, Assistant Vice Pres  
of the Aetna Life Insurance Company, a Connecticut Corporation, to me known to be the  
individual described in and who executed the within and foregoing instrument, and  
acknowledged that he signed and sealed the same as his free and  
voluntary act and deed, for the uses and purposes therein mentioned and on oath stated  
that he is authorized to execute the said instrument and that the seal affixed  
is the corporate seal of said corporation.

Witness my hand and official seal this 24<sup>th</sup> day of October, 1979.

Pamela J. Coste  
Notary Public in and for the State of  
Connecticut  
Residing at Torington  
Pamela J. Coste, my comm. exp. 3-31-84

7912270667



DECLARATION

Know all men by these presents that the undersigned, MODERN MERCHANDISING, INC., a Minnesota corporation, lessee of a portion of the land herein described do hereby make a short subdivision thereof pursuant to RCW 58.17.060 and declare this short plat to be the graphic representation of same, and that said short subdivision is made with the free consent and in accordance with the desire of the lessee.

In Witness Whereof we have set our hand(s) and seal this 5<sup>th</sup> day of November, 1979.

MODERN MERCHANDISING, INC.  
a Minnesota corporation

By: B. Gordon  
Its: V.P. P.N.W.

By: \_\_\_\_\_  
Its: \_\_\_\_\_

STATE OF WASHINGTON) ) ss.  
COUNTY OF King

On this 5<sup>th</sup> day of November, 1979, before me, the undersigned, a Notary Public in and for the State of Washington, duly commissioned and sworn, personally appeared B. Gordon and \_\_\_\_\_ to be the \_\_\_\_\_ and Vice President respectively of MODERN MERCHANDISING, INC., the corporation that executed the foregoing instrument, and acknowledged the said instrument to be the free and voluntary act and deed of said corporation, for the uses and purposes therein mentioned, and on oath stated that he is authorized to execute the said instrument.

Witness my hand and official seal the day and year first above written.

Anne L Johnston  
Notary Public in and for the State of  
Wash, residing at Seattle

7912270667

# EVERGREEN PLAZA

A PLANNED UNIT DEVELOPMENT  
SECTION 9, TOWNSHIP 21N., RANGE 4E., W.M.  
KING COUNTY, WASHINGTON

BUSH · ROED · & HITCHINGS, P.S., INC.

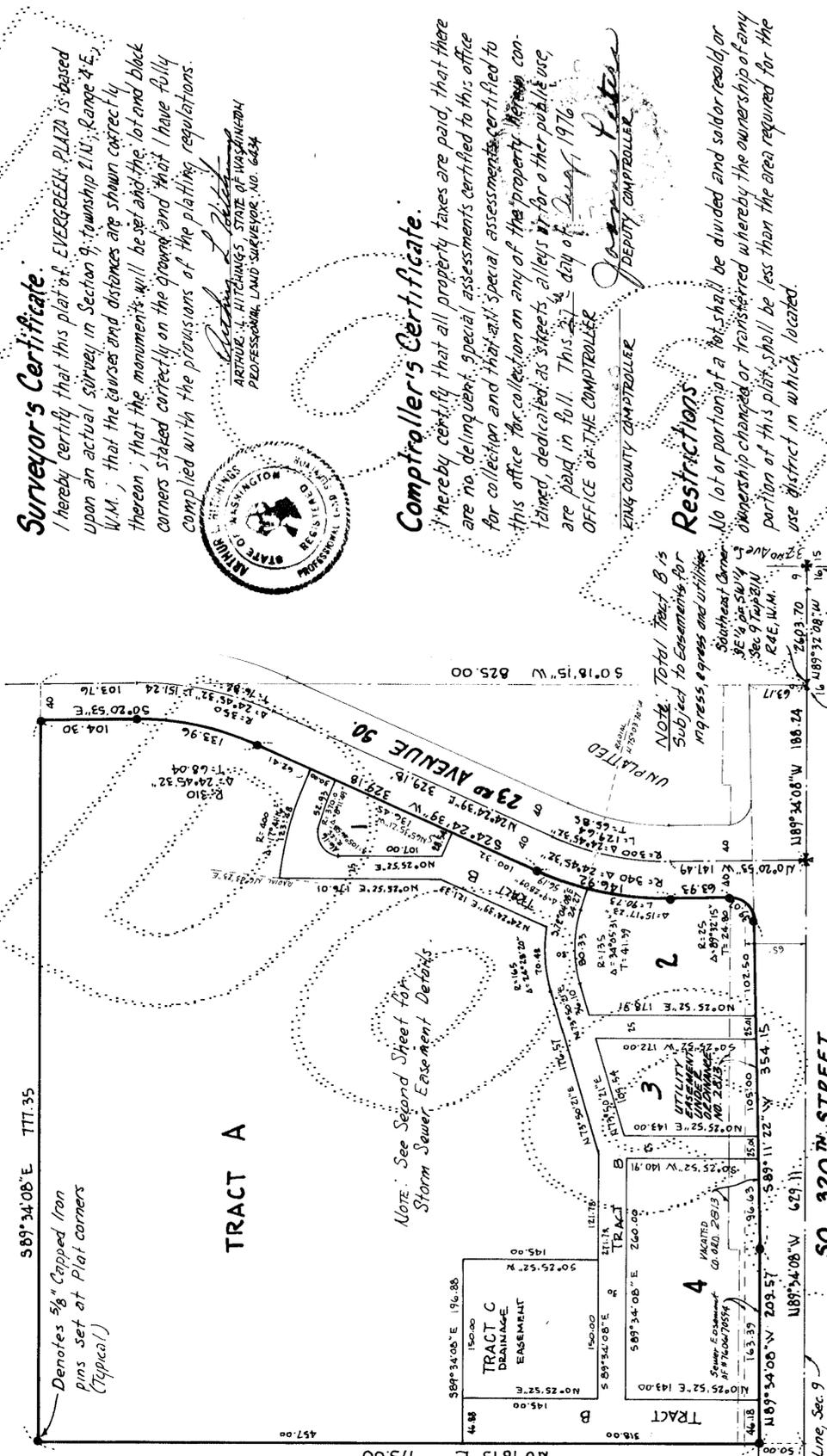
UNPLATTED

S89°34'08"E T11.35

Denotes 3/4" Capped Iron  
pins set at Plat corners  
(Typical)

TRACT A

Scale:  
1" = 100'  
KCAS  
DATUM



Note: See Second Sheet for  
Storm Sewer Easement Details

UNPLATTED  
PACIFIC HIGHWAY 50  
17° 16' 00" N  
117° 00' 00" W

## Surveyor's Certificate

I hereby certify that this plat of EVERGREEN PLAZA is based upon an actual survey in Section 9, Township 21N., Range 4E., W.M.; that the courses and distances are shown correctly thereon; that the monuments will be set and the lot and block corners staked correctly on the ground and that I have fully complied with the provisions of the platting regulations.

*Arthur L. Hitchings*  
ARTHUR L. HITCHINGS  
STATE OF WASHINGTON  
PROFESSIONAL LAND SURVEYOR, NO. 6634



## Comptroller's Certificate

I hereby certify that all property taxes are paid, that there are no delinquent special assessments certified to this office for collection and that all special assessments certified to this office for collection on any of the property therein contained, dedicated as streets, alleys or for other public use, are paid in full. This 27<sup>th</sup> day of August, 1976.

*Joyanna Patten*  
JOYANNA PATTEN  
DEPUTY COMPTROLLER  
KING COUNTY

## Restrictions

No lot or portion of a lot shall be divided and sold or sold or ownership changed or transferred whereby the ownership of any portion of this plat shall be less than the area required for the use district in which located.

## APPROVALS

Examined and approved this 25<sup>th</sup> day of Aug., 1976.  
Department of Public Works.

*J. S. Meehan*  
J. S. MEEHAN  
DIRECTOR

Examined and approved this 26<sup>th</sup> day of August, 1976.  
Department of Planning & Community Development.

*Edward B. Land*  
EDWARD B. LAND  
MANAGER, BUILDING & LAND DEVELOPMENT DIVISION

Examined and approved this 2<sup>nd</sup> day of \_\_\_\_\_, 1976.  
Department of Assessments.

*Harley*  
HARLEY  
KING COUNTY ASSESSOR  
Examined and approved this 30<sup>th</sup> day of August, 1976.  
King County Council.

*Chairman*  
CHAIRMAN, KING COUNTY COUNCIL

*City Administrator*  
CITY ADMINISTRATOR OF COUNCIL

## Recording Certificate

Filed for record at the request of the King County Council this 30<sup>th</sup> day of AUG., 1976, at 14 minutes past 4:00 P.M. and recorded in Volume 100 of Plats, page 74.75, records of King County, Washington.  
Division of Records & Elections.

*Manager*  
MANAGER  
SUPERINTENDENT OF RECORDS

39.07 FEET TO A POINT OF TRANGENCY ON S1/4 NW1/4 NORTH MARGIN OF SA 320N STREET, THENCE S89°11'22" W ALONG SAID NORTH MARGIN 587.11' TO A POINT OF TRANGENCY ON S1/4 NW1/4 NORTH MARGIN OF SA 320N STREET, THENCE S89°11'22" W ALONG SAID NORTH MARGIN 587.11' TO THE POINT OF BEGINNING.

Sheet 1 of 2

PLANNED UNIT DEVELOPMENT FILE NO. 239-75-P 7458

## Dedication

KNOW ALL MEN BY THESE PRESENTS, that we, the undersigned owners in fee simple of the land hereby platted, declare this plat and dedicate to the use of the public for all streets and avenues shown hereon and the use thereof for all public purposes not inconsistent with the use thereof for public highway purposes, also the right to make a necessary ingress, egress and utility.

IN WITNESS WHEREOF, we have set our hands and seals this 14<sup>th</sup> day of June, 1976.  
EVERGREEN FEDERAL PLAZA ASSOCIATES, A CALIFORNIA LIMITED PARTNERSHIP,  
By: M.D.R. INVESTMENTS, GENERAL PARTNER  
Donald Bogdan, Ruben Polunsky, Martin Landis  
DONALD BOGDAN RUBEN POLUNSKY MARTIN LANDIS  
PACIFIC NATIONAL BANK OF WASHINGTON  
DONALD BOGDAN, Trustee  
M.D.R. INVESTMENTS, Trustee  
MARTIN LANDIS, Trustee

## Acknowledgments

STATE OF CALIFORNIA  
COUNTY OF LOS ANGELES } SS  
This is to certify that on the 14<sup>th</sup> day of JUNE, 1976 before me, the undersigned a Notary Public, personally appeared Anthony H. Barash, Trustee for Evergreen Federal Plaza Trust, to me known to be the individual who executed the above dedication and acknowledged to me that he signed and sealed the same as his voluntary act and deed for the purposes therein mentioned. I witnessed my hand and official seal the day and year first above written.

*Betsy M. Sutton*  
BETSY M. SUTTON  
NOTARY PUBLIC IN AND FOR THE STATE OF CALIFORNIA  
My Commission Expires 03/27/77

STATE OF CALIFORNIA  
COUNTY OF LOS ANGELES } SS  
This is to certify that on the 14<sup>th</sup> day of JUNE, 1976 before me, the undersigned, a Notary Public, personally appeared Donald Bogdan, Ruben Polunsky and Martin Landis, Partners of Evergreen Federal Plaza Associates, a California Limited Partnership, to me known to be the individuals who executed the above dedication and acknowledged to me that they signed and sealed the same as their voluntary act and deed for the purposes therein mentioned and on each stated that they were authorized to execute said instrument, and that the said affixed seal is the corporate seal of said Corporation.

WITNESS my hand and official seal the day and year first above written.  
*Betsy M. Sutton*  
BETSY M. SUTTON  
NOTARY PUBLIC IN AND FOR THE STATE OF CALIFORNIA  
My Commission Expires 03/27/77

STATE OF CALIFORNIA  
COUNTY OF LOS ANGELES } SS  
This is to certify that on the 14<sup>th</sup> day of JUNE, 1976 before me, the undersigned, a Notary Public, personally appeared Donald Bogdan, Ruben Polunsky and Martin Landis, Partners of Evergreen Federal Plaza Associates, a California Limited Partnership, to me known to be the individuals who executed the above dedication and acknowledged to me that they signed and sealed the same as their voluntary act and deed for the purposes therein mentioned and on each stated that they were authorized to execute said instrument, and that the said affixed seal is the corporate seal of said Corporation.

WITNESS my hand and official seal the day and year first above written.  
*Betsy M. Sutton*  
BETSY M. SUTTON  
NOTARY PUBLIC IN AND FOR THE STATE OF CALIFORNIA  
My Commission Expires 03/27/77

STATE OF CALIFORNIA  
COUNTY OF LOS ANGELES } SS  
This is to certify that on the 14<sup>th</sup> day of JUNE, 1976 before me, the undersigned, a Notary Public, personally appeared Donald Bogdan, Ruben Polunsky and Martin Landis, Partners of Evergreen Federal Plaza Associates, a California Limited Partnership, to me known to be the individuals who executed the above dedication and acknowledged to me that they signed and sealed the same as their voluntary act and deed for the purposes therein mentioned and on each stated that they were authorized to execute said instrument, and that the said affixed seal is the corporate seal of said Corporation.

WITNESS my hand and official seal the day and year first above written.  
*Betsy M. Sutton*  
BETSY M. SUTTON  
NOTARY PUBLIC IN AND FOR THE STATE OF CALIFORNIA  
My Commission Expires 03/27/77

STATE OF CALIFORNIA  
COUNTY OF LOS ANGELES } SS  
This is to certify that on the 14<sup>th</sup> day of JUNE, 1976 before me, the undersigned, a Notary Public, personally appeared Donald Bogdan, Ruben Polunsky and Martin Landis, Partners of Evergreen Federal Plaza Associates, a California Limited Partnership, to me known to be the individuals who executed the above dedication and acknowledged to me that they signed and sealed the same as their voluntary act and deed for the purposes therein mentioned and on each stated that they were authorized to execute said instrument, and that the said affixed seal is the corporate seal of said Corporation.

WITNESS my hand and official seal the day and year first above written.  
*Betsy M. Sutton*  
BETSY M. SUTTON  
NOTARY PUBLIC IN AND FOR THE STATE OF CALIFORNIA  
My Commission Expires 03/27/77

18 25 00

# EVERGREEN PLAZA

A PLANNED UNIT DEVELOPMENT  
SECTION 9, TOWNSHIP 21N., RANGE 4E., W.M.  
KING COUNTY, WASHINGTON

BUSH ROED & HITCHINGS, P.S., INC.

**ACCESS NOTE:**

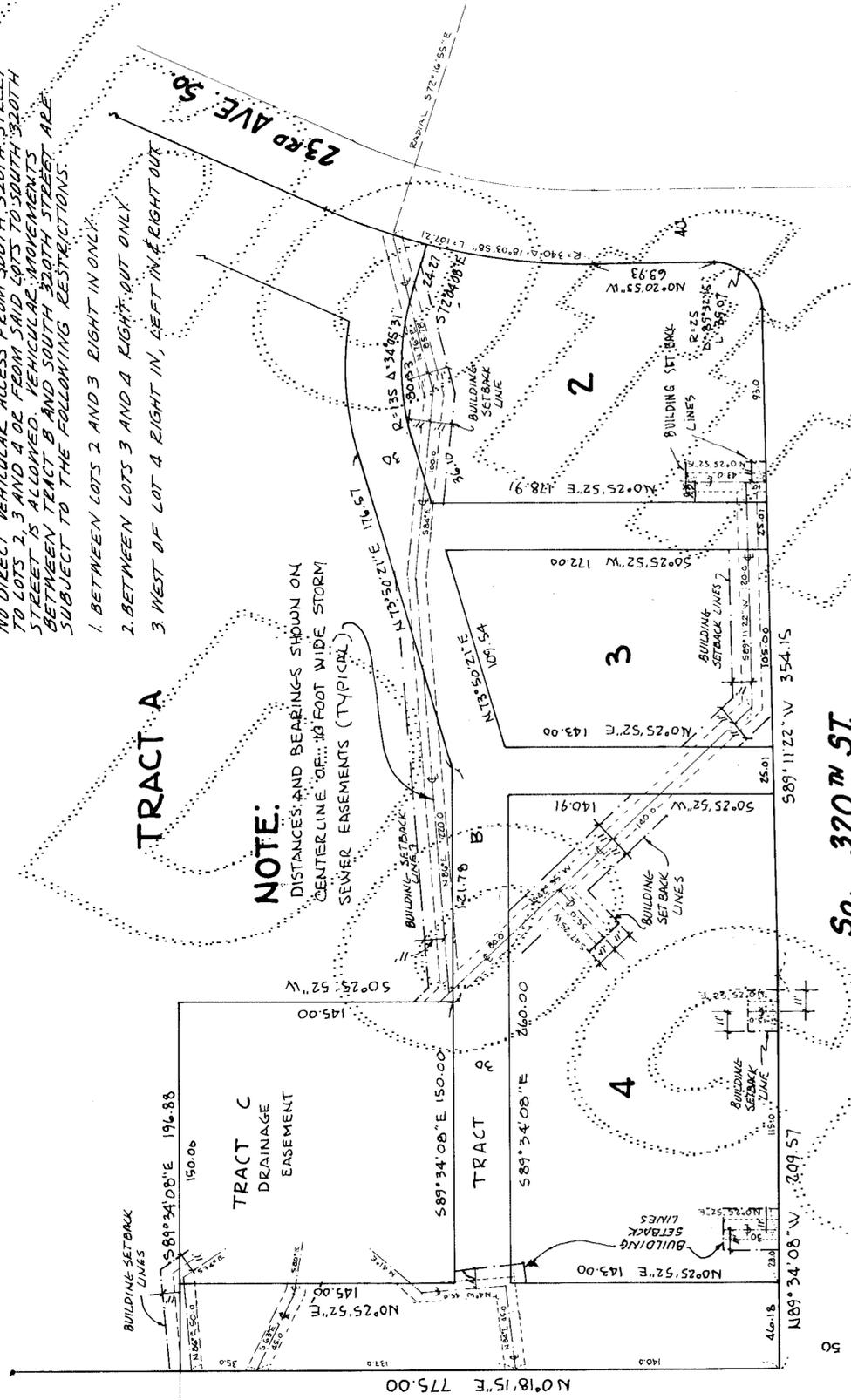
NO DIRECT VEHICULAR ACCESS FROM SOUTH 320TH STREET TO LOTS 2, 3 AND 4 OR FROM SAID LOTS TO SOUTH 320TH STREET IS ALLOWED. VEHICULAR MOVEMENTS BETWEEN TRACT B AND SOUTH 320TH STREET ARE SUBJECT TO THE FOLLOWING RESTRICTIONS:

1. BETWEEN LOTS 2 AND 3 RIGHT IN ONLY;
2. BETWEEN LOTS 3 AND 4 RIGHT OUT ONLY;
3. WEST OF LOT 4 RIGHT IN, LEFT IN & RIGHT OUT.

**TRACT A**

**NOTE:**

DISTANCES AND BEARINGS SHOWN ON CENTERLINE OF 10 FOOT WIDE STORM SEWER EASEMENTS (TYPICAL)



So. 320th St.

**STORM SEWER EASEMENT DETAIL**

SCALE: 1" = 50'

**Acknowledgement:**

STATE OF WASHINGTON, COUNTY OF KING  
This is to certify that on the 23rd day of Aug. 1976, before me, the undersigned a Notary Public, Personally appeared JOHN EDLINGTON, Vice Pres and ~~Secretary~~ <sup>and Vice Pres</sup> of Pacific National Bank of Washington, a Washington Corporation, to wit: known to be the individuals who executed the within dedication and acknowledged to me that they signed and sealed the same, as their voluntary act and deed for the uses and purposes therein mentioned, and on oath stated that they were authorized to execute said instrument and that the seal affixed is the corporate seal of said Corporation.  
WITNESS my hand and seal the day and year first above written:

*William D. Stiles*

NOTARY PUBLIC in and for the STATE OF WASHINGTON residing at ~~Seattle~~

**DEDICATION**

I, ALL MEN BY THESE PRESENTS THAT WE, THE UNDERSIGNED KNOWN CLAIMANTS OF THE LAND HEREBY PUBLIC, DECLARE THIS PLAT AND DEDICATE TO THE USE OF THE PUBLIC FOREVER ALL STREETS AND AVENUES SHOWN HEREON AND THE USE THEREOF FOR ALL PUBLIC PURPOSES NOT INCONSISTENT WITH THE USE THEREOF FOR PUBLIC HIGHWAY PURPOSES. ALSO THE RIGHT TO TAKE ALL NECESSARY SLOPES FOR CUTS AND FILLS UPON THE LOTS AND BLOCKS SHOWN ON THIS PLAT IN THE ORIGINAL REASONABLE BEARING OF THE STREETS AND AVENUES SHOWN HEREON.

IN WITNESS WHEREOF WE HAVE SET OUR HANDS AND SEALS THIS 25TH DAY OF AUGUST 1976.

BUSH, ROED AND HITCHINGS, P.S., INC., A WASHINGTON CORPORATION

*Arthur L. Hitchings*  
ARTHUR L. HITCHINGS, SECRETARY

**ACKNOWLEDGEMENT**

STATE OF WASHINGTON, COUNTY OF KING

THIS IS TO CERTIFY THAT ON THE 25TH DAY OF AUGUST 1976, BEFORE ME, THE UNDERSIGNED, A NOTARY PUBLIC, PERSONALLY APPEARED ARTHUR L. HITCHINGS, SECRETARY OF BUSH, ROED AND HITCHINGS, A WASHINGTON PROFESSIONAL SERVICES CORPORATION, TO WIT: KNOWN TO BE THE INDIVIDUAL WHO EXECUTED THE WITHIN DEDICATION AND ACKNOWLEDGED TO ME THAT HE SIGNED AND SEALED THE SAME AS HIS VOLUNTARY ACT AND DEED FOR THE USES AND PURPOSES THEREIN MENTIONED, AND ON OATH STATED THAT HE WAS AUTHORIZED TO EXECUTE SAID INSTRUMENT AND THAT THE SEAL AFFIXED IS THE CORPORATE SEAL OF SAID CORPORATION.  
WITNESS MY HAND AND SEAL THE DAY AND YEAR FIRST ABOVE WRITTEN.

*Robert M. Reed*

NOTARY PUBLIC IN AND FOR THE STATE OF WASHINGTON RESIDING AT SEATTLE

# AMENDMENT TO EVERGREEN PLAZA BINDING SITE PLAN/ PUD

THAT PORTION OF THE SE1/4 OF THE SW 1/4  
OF SECTION 9, TOWNSHIP 21 NORTH, RANGE 4 EAST, W.M.  
CITY OF FEDERAL WAY, WASHINGTON

## DEDICATION

WE, THE UNDERSIGNED OWNERS OF THE HEREIN DESCRIBED PROPERTIES, MAKE A SUBDIVISION GRAPHICALLY REPRESENTED BY ATTACHED BINDING SITE PLAN.

D. Michael Dunne  
BY: BSP LOT # 1, 5 AND 6  
Richard Day  
BY: BSP LOT # 2  
Summy Coleman  
BY: BSP LOT # 3

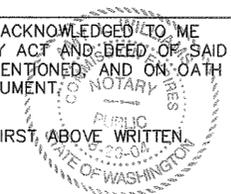
Moumi N. Sawda  
BY: BSP LOT # 7  
KERRI B. ANDERSON  
BY: BSP LOT # 7  
Executive Vice President &  
Chief Financial Officer  
LAW DEPT. WWS

## ACKNOWLEDGMENTS

STATE OF WASHINGTON )  
COUNTY OF KING )

THIS IS TO CERTIFY THAT ON THIS 12<sup>th</sup> DAY OF March, 2003 BEFORE ME, THE UNDERSIGNED, A NOTARY PUBLIC, PERSONALLY APPEARED D. Michael Dunne Managing partner OF DCATE LLC THAT EXECUTED THE FOREGOING DEDICATION, AND WHO ACKNOWLEDGED TO ME THE SAID INSTRUMENT TO BE THE FREE AND VOLUNTARY ACT AND DEED OF SAID ASSOCIATION, FOR THE USES AND PURPOSES THEREIN MENTIONED, AND ON OATH STATED THAT HE WAS AUTHORIZED TO EXECUTE THE SAID INSTRUMENT.

WITNESS MY HAND OFFICIAL SEAL THE DAY AND YEAR FIRST ABOVE WRITTEN.  
Amy L. Williams  
NOTARY PUBLIC IN AND FOR THE STATE OF WASHINGTON, RESIDING AT Kent 98032



STATE OF Ohio )  
COUNTY OF Franklin )

THIS IS TO CERTIFY THAT ON THIS 28<sup>th</sup> DAY OF March, 2003, BEFORE ME, THE UNDERSIGNED, A NOTARY PUBLIC, PERSONALLY APPEARED Kerri B. Anderson Executive Vice President + CFO OF Wendy's International, Inc THAT EXECUTED THE FOREGOING DEDICATION, AND WHO ACKNOWLEDGED TO ME THE SAID INSTRUMENT TO BE THE FREE AND VOLUNTARY ACT AND DEED OF SAID ASSOCIATION, FOR THE USES AND PURPOSES THEREIN MENTIONED, AND ON OATH STATED THAT HE WAS AUTHORIZED TO EXECUTE THE SAID INSTRUMENT.

WITNESS MY HAND OFFICIAL SEAL THE DAY AND YEAR FIRST ABOVE WRITTEN.

Darcy B. Mihal  
NOTARY PUBLIC IN AND FOR THE STATE OF Ohio RESIDING AT 5346 Dale Dr Columbus, OH 43220

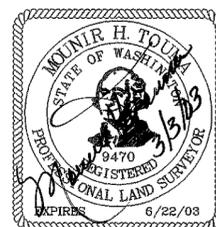


STATE OF South Carolina )  
COUNTY OF SPARTANBURG )

THIS IS TO CERTIFY THAT ON THIS 23<sup>rd</sup> DAY OF July, 2003 BEFORE ME, THE UNDERSIGNED, A NOTARY PUBLIC, PERSONALLY APPEARED Mounir N. Sawda VICE PRESIDENT OF JENNY'S BEAUTY INC THAT EXECUTED THE FOREGOING DEDICATION, AND WHO ACKNOWLEDGED TO ME THE SAID INSTRUMENT TO BE THE FREE AND VOLUNTARY ACT AND DEED OF SAID ASSOCIATION, FOR THE USES AND PURPOSES THEREIN MENTIONED, AND ON OATH STATED THAT HE WAS AUTHORIZED TO EXECUTE THE SAID INSTRUMENT.

WITNESS MY HAND OFFICIAL SEAL THE DAY AND YEAR FIRST ABOVE WRITTEN.

Timothy E. Flemming  
TIMOTHY E. FLEMMING  
NOTARY PUBLIC  
NOTARY PUBLIC IN AND FOR THE STATE OF South Carolina RESIDING AT 100 Dog Hill Road Anderson, SC 29356  
MY COMMISSION EXPIRES APRIL 22, 2004



STATE OF Wash )  
COUNTY OF King )

THIS IS TO CERTIFY THAT ON THIS 30<sup>th</sup> DAY OF July, 2003 BEFORE ME, THE UNDERSIGNED, A NOTARY PUBLIC, PERSONALLY APPEARED Richard Day OF Wash Federal Realty THAT EXECUTED THE FOREGOING DEDICATION, AND WHO ACKNOWLEDGED TO ME THE SAID INSTRUMENT TO BE THE FREE AND VOLUNTARY ACT AND DEED OF SAID ASSOCIATION, FOR THE USES AND PURPOSES THEREIN MENTIONED, AND ON OATH STATED THAT HE WAS AUTHORIZED TO EXECUTE THE SAID INSTRUMENT.

WITNESS MY HAND OFFICIAL SEAL THE DAY AND YEAR FIRST ABOVE WRITTEN.

Ma Bazi  
NOTARY PUBLIC IN AND FOR THE STATE OF WA RESIDING AT Maple

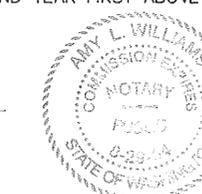


STATE OF Wash )  
COUNTY OF King )

THIS IS TO CERTIFY THAT ON THIS 31<sup>st</sup> DAY OF July, 2003, BEFORE ME, THE UNDERSIGNED, A NOTARY PUBLIC, PERSONALLY APPEARED Bradley Lindsay OF Arco THAT EXECUTED THE FOREGOING DEDICATION, AND WHO ACKNOWLEDGED TO ME THE SAID INSTRUMENT TO BE THE FREE AND VOLUNTARY ACT AND DEED OF SAID ASSOCIATION, FOR THE USES AND PURPOSES THEREIN MENTIONED, AND ON OATH STATED THAT HE WAS AUTHORIZED TO EXECUTE THE SAID INSTRUMENT.

WITNESS MY HAND OFFICIAL SEAL THE DAY AND YEAR FIRST ABOVE WRITTEN.

Amy L. Williams  
NOTARY PUBLIC IN AND FOR THE STATE OF WA RESIDING AT Kent, 98032



## ACCESS NOTES

NO DIRECT VEHICULAR ACCESS FROM SOUTH 320TH STREET TO LOTS 2, 3 AND 4 OR FROM LOTS 2 TO SOUTH 320TH STREET IS ALLOWED. VEHICULAR MOVEMENTS BETWEEN TRACT B AND SOUTH 320TH STREET ARE SUBJECT TO THE FOLLOWING RESTRICTIONS:

- 1. BETWEEN LOTS 2 AND 3 RIGHT IN ONLY
- 2. BETWEEN LOTS 3 AND 4 RIGHT OUT ONLY.
- 3. WEST OF LOTS 4 RIGHT IN, LEFT IN AND RIGHT OUT.

## SPECIAL NOTES

THE AMENDMENT TO THE "EVERGREEN PLAZA BINDING SITE PLAN/PUD" IS PREPARED TO ALTER THE LANGUAGE OF THE UNDERLYING "EVERGREEN PLAZA PUD" AND ELIMINATE THE DRAINAGE TRACT LIMITATION FROM THE FACE OF THE PLAT.

ZONING/COMPREHENSIVE PLAN - CITY CENTER CORE (ZONE =CC-C)

# AMENDMENT TO EVERGREEN PLAZA BINDING SITE PLAN/ PUD

THAT PORTION OF THE SE1/4 OF THE SW 1/4  
OF SECTION 9, TOWNSHIP 21 NORTH, RANGE 4 EAST, W.M.  
CITY OF FEDERAL WAY, WASHINGTON

### APPROVALS

#### CITY OF FEDERAL WAY

Examined and approved this 29<sup>th</sup> day of August, 2003

Ken Miller (for)  
DIRECTOR OF PUBLIC WORKS

Examined and approved this 29<sup>th</sup> day of AUGUST, 2003

My Kim for KATHY M. SCHUG  
DIRECTOR OF COMMUNITY DEVELOPMENT

#### KING COUNTY DEPARTMENT OF ASSESSMENTS

Examined and approved this 3<sup>rd</sup> day of September, 2003

Scott Noble  
ASSESSOR  
Russell Scheidelman  
DEPUTY ASSESSOR

### RECORDING CERTIFICATE

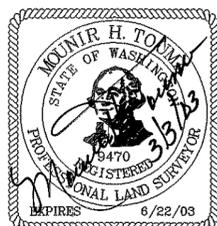
FILED FOR RECORD AT THE REQUEST OF THE FEDERAL WAY CITY COUNCIL THIS 9<sup>th</sup>  
DAY OF Sept A.D. 2003 AT 10 MINUTES PAST 10:00 AM, AND RECORDED  
IN VOLUME 216 OF PLATS, PAGE 36-38, RECORDS OF KING COUNTY.  
KING COUNTY, WASHINGTON  
DIVISION OF RECORDS AND ELECTIONS

Dean Logan MANAGER      Walt Washington SUPERINTENDENT OF RECORDS

### SURVEYOR'S CERTIFICATE

I HEREBY CERTIFY THAT THIS BINDING SITE PLAN IS BASED UPON AN ACTUAL SURVEY AND  
SUBDIVISION OF SECTION 9, TOWNSHIP 21 NORTH, RANGE 4E, W.M., THAT THE COURSES  
AND DISTANCES ARE SHOWN CORRECTLY THEREON; I HAVE COMPLIED WITH ALL STATE  
COUNTRY AND CITY REGULATIONS GOVERNING PLATTING

Moumir H. Touma  
MOUHIR H. TOUMA PLS.  
PROFESSIONAL LAND SURVEYOR  
CERTIFICATE NO 9470



### LEGAL DESCRIPTION

#### PARCEL A

TRACTS B, C AND LOT 1, EVERGREEN PLAZA, ACCORDING TO THE PLAT THEREOF,  
RECORDED IN VOLUME 100 OF PLATS, PAGE 74, IN KING COUNTY, WASHINGTON;

TOGETHER WITH LOT 2 OF CITY OF FEDERAL WAY BOUNDARY LINE ADJUSTMENT  
NUMBER BLA 00-104493, RECORDED UNDER RECORDING NUMBER 20010215900003;  
EXCEPT THAT PORTION CONVEYED TO THE CITY OF FEDERAL WAY BY DEED RECORDED  
UNDER RECORDING NUMBER 200007211001417.

#### PARCEL B

LOT 1 OF CITY OF FEDERAL WAY BOUNDARY LINE ADJUSTMENT NUMBER BLA  
00-104493, RECORDED UNDER RECORDING NUMBER 2001021500003.

#### PARCEL C

LOT 2, EVERGREEN PLAZA, ACCORDING TO THE PLAT THEREOF, RECORDED IN VOLUME  
100 OF PLATS, PAGE 74, IN KING COUNTY, WASHINGTON;

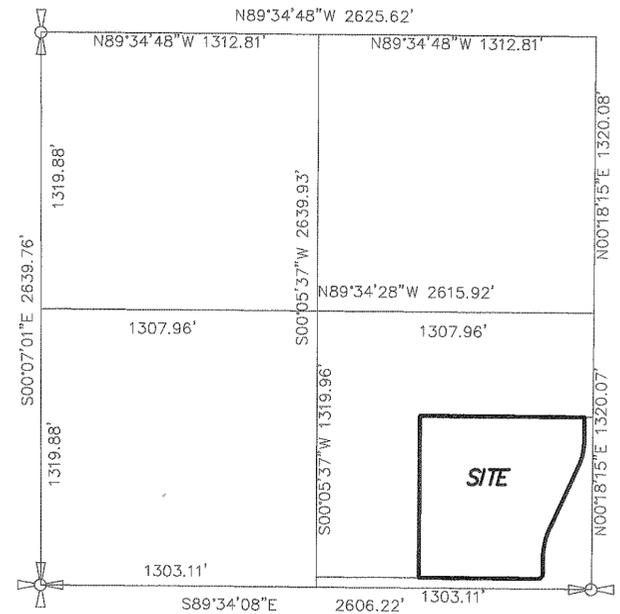
EXCEPT THAT PORTION CONVEYED TO THE CITY OF FEDERAL WAY BY DEED RECORDED  
UNDER RECORDING NUMBER 20000803000870.

#### PARCEL D

LOT 3, EVERGREEN PLAZA, ACCORDING TO THE PLAT THEREOF, RECORDED IN VOLUME  
100 OF PLATS, PAGE 74, IN KING COUNTY, WASHINGTON.

#### PARCEL E

LOT 4, EVERGREEN PLAZA, ACCORDING TO THE PLAT THEREOF, RECORDED IN VOLUME  
100 OF PLATS, PAGE 74, IN KING COUNTY, WASHINGTON.



#### DEVELOPER:

DCG II, LLC  
10818 SE KENT-KANGLEY RD, SUITE 104  
KENT, WA. 98031

#### OWNERS:

DCG II, LLC  
10818 SE KENT-KANGLEY RD  
SUITE 104  
KENT, WA 98031  
PHONE 253-852-6400

Denny's, Inc.  
3345 Michaelson Drive  
Suite 200  
Irvine, CA 92715

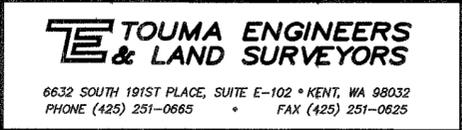
Wendy's International, Inc.  
4288 W. Dublin Granville Road  
Dublin, Ohio 43017

Washington Federal Savings and Loan  
1119 Pacific Avenue, M.S. 0291  
Tacoma, WA 98402

ARG Enterprises, Inc.  
4410 El Camino Real  
Suite 201  
Los Altos, CA 94022

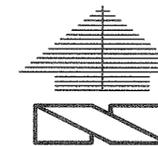
#### SURVEYOR:

TOUMA ENGINEERS/LAND SURVEYORS  
6632 SOUTH 191ST PLACE  
SUITE E102  
KENT, WA 98032  
PHONE 425-251-0665

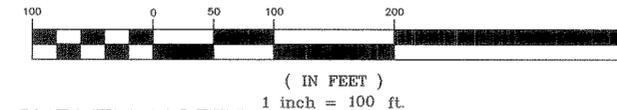


# AMENDMENT TO EVERGREEN PLAZA BINDING SITE PLAN/ PUD

THAT PORTION OF THE SE1/4 OF THE SW 1/4  
OF SECTION 9, TOWNSHIP 21 NORTH, RANGE 4 EAST, W.M.  
CITY OF FEDERAL WAY, WASHINGTON



GRAPHIC SCALE

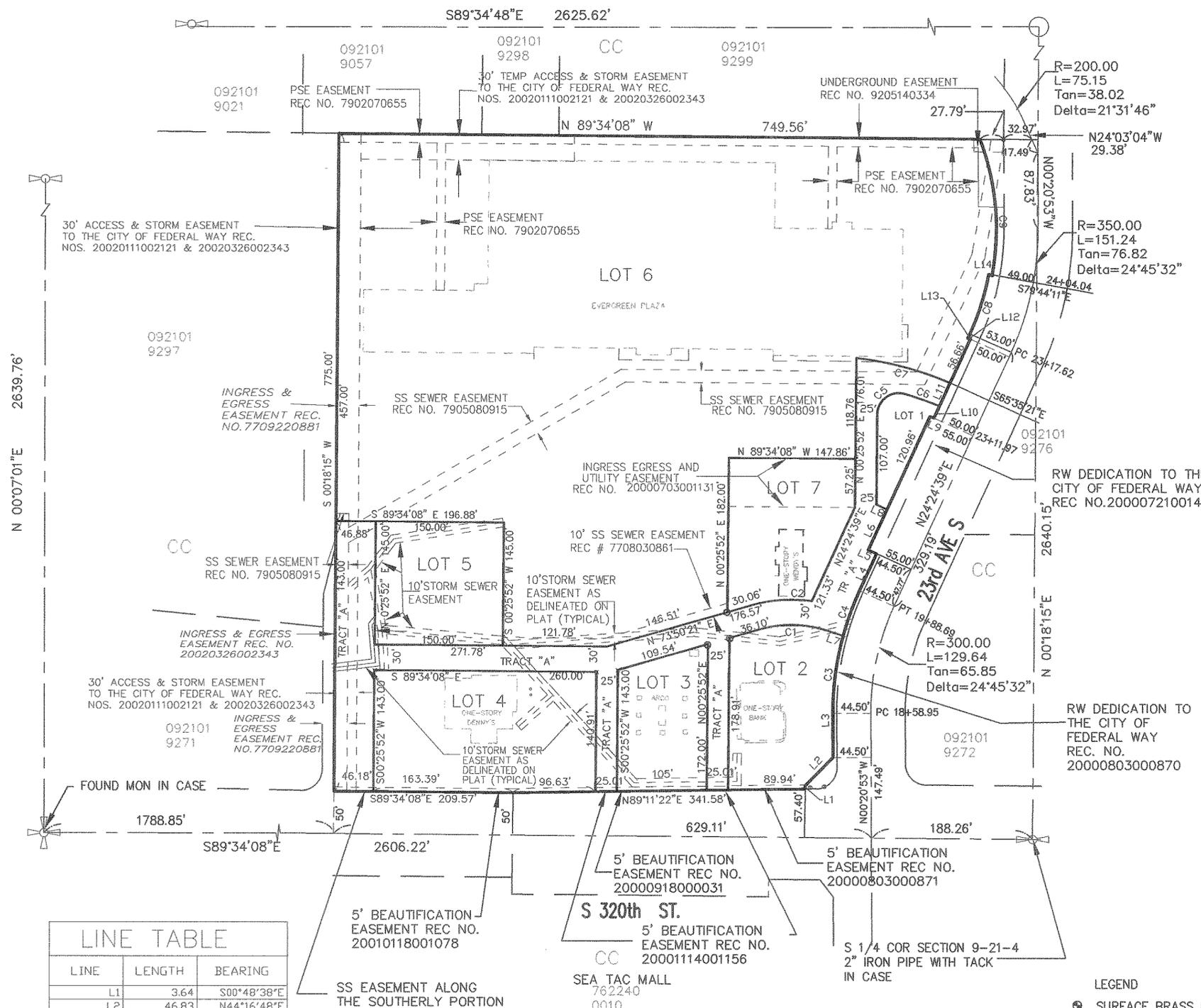


### SURVEY NOTES

INSTRUMENT: NIKON TOTAL STATION DTM-A10LG  
(5 SECOND INSTRUMENT).  
METHOD USED: FIELD TRAVERSE WITH ACTUAL  
FIELD MEASUREMENTS AND ANGLES  
WAC 332-130-090  
DATE OF SURVEY: JUNE 2001  
BASIS OF BEARING: THE PLAT OF EVERGREEN PLAZA VOL. 100,  
PAGE 74, RECORDS OF KING CO.

### NOTES

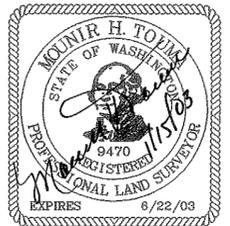
- ALL COVENANTS, CONDITIONS, RESTRICTIONS, RESERVATIONS, EASEMENT FOR OTHER SERVITUDES, IF ANY, DISCLOSED BY THE RECORDED PLAT OF EVERGREEN PLAZA, AS RECORDED IN VOLUME 100 OF PLATS, PAGE 74, RECORDS OF KING COUNTY, WASHINGTON.
- ALL COVENANTS, CONDITIONS, RESTRICTIONS, RESERVATIONS, EASEMENTS OR OTHER SERVITUDES, IF ANY DISCLOSED BY THE SHORT PLAT RECORDED UNDER RECORDING NO. 7912270667, RECORDS OF KING COUNTY, WASHINGTON.
- ALL COVENANTS, CONDITIONS, RESTRICTIONS, RESERVATIONS, EASEMENTS OR OTHER SERVITUDES, IF ANY DISCLOSED BY THE BOUNDARY LINE ADJUSTMENT RECORDED UNDER RECORDING NO. 20010215900003, RECORDS OF KING COUNTY, WASHINGTON.
- SANITARY SEWER EASEMENT & AGREEMENT AND TERMS AND CONDITIONS RECORDED UNDER RECORDING NO. 7810090769, RECORDS OF KING COUNTY, WASHINGTON.
- DOMESTIC WATER EASEMENT & AGREEMENT AND TERMS AND CONDITIONS RECORDED UNDER RECORDING NO. 7810090768, RECORDS OF KING COUNTY, WASHINGTON.
- WASHINGTON NATURAL GAS COMPANY EASEMENT AND TERMS AND CONDITIONS RECORDED UNDER RECORDING NO. 9411180603. ITS DESCRIPTION IS NOT SUFFICIENT TO DETERMINE ITS EXACT LOCATION.
- COVENANTS, CONDITIONS AND RESTRICTIONS IMPOSED BY INSTRUMENT RECORDED UNDER RECORDING NO. 9510121424, IN KING COUNTY, WASHINGTON.
- COVENANTS, CONDITIONS AND RESTRICTIONS IMPOSED BY INSTRUMENT RECORDED UNDER RECORDING NO. 9808101434, IN KING COUNTY, WASHINGTON.
- TEMPORARY CONSTRUCTION EASEMENT AND THE TERMS AND CONDITIONS IMPOSED BY INSTRUMENT RECORDED UNDER RECORDING NO. 20000721001418.
- PERMANENT BEAUTIFICATION EASEMENT AND THE TERMS AND CONDITIONS IMPOSED BY INSTRUMENT RECORDED UNDER RECORDING NO. 20001117001156.
- EASEMENT AND THE TERMS AND CONDITIONS FOR PUGET POWER UNDERGROUND EASEMENT RECORDED UNDER RECORDING NO. 7912280536. ITS DESCRIPTION IS NOT SUFFICIENT TO DETERMINE ITS EXACT LOCATION.
- PSE EASEMENT RECORDED UNDER RECORDING NO. 7707070686. ITS DESCRIPTION IS NOT SUFFICIENT TO DETERMINE ITS EXACT LOCATION.
- 10' WATER EASEMENT RECORDED UNDER RECORDING NO. 7606170697 ITS DESCRIPTION IS NOT SUFFICIENT TO DETERMINE ITS EXACT LOCATION.
- PSE EASEMENT RECORDED UNDER RECORDING NO. 7912280536, ITS DESCRIPTION IS NOT SUFFICIENT TO DETERMINE ITS EXACT LOCATION.
- WATER EASEMENT RECORDED UNDER RECORDING NO. 8002250543. ITS DESCRIPTION IS NOT SUFFICIENT TO DETERMINE ITS EXACT LOCATION.
- NATURAL GAS EASEMENT RECORDED UNDER RECORDING NO. 9205140334. ITS DESCRIPTION IS NOT SUFFICIENT TO DETERMINE ITS EXACT LOCATION.
- SLOPE EASEMENT AFFECT THE EAST BOUNDARY OF TRACT A, B AND LOT 1 OF THE ORIGINAL PUD RECORDED UNDER RECORDING NO. 7610010118.
- DRIVEWAY EASEMENT OVER LOT 1 RECORDED UNDER RECORDING NO. 2000070300130.
- WATER MAINTENANCE EASEMENT ACROSS LOT 1 OF FWBLA 00-104493 RECORDED UNDER RECORDING NO. 20010302002469.
- SS EASEMENT ALONG THE NORTH 15 FEET OF THE SOUTH 65 FEET OF TRACT A, LOTS 2,3 AND 4 MEASURED AT RIGHT ANGLES AND PARALLEL TO THE CENTERLINE OF SOUTH 320TH STREET RIGHT OF WAY RECORDED UNDER RECORDING NO. 7606170594.
- 10' WATER EASEMENT ALONG THE SOUTH PORTIONS OF LOTS 2, 3 AND 4 RECORDED UNDER RECORDING NO. 7606170697. ITS DESCRIPTION IS NOT SUFFICIENT TO DETERMINE ITS EXACT LOCATION.
- TEMPORARY CONSTRUCTION EASEMENT ALONG THE EAST BOUNDARY OF TRACTS A, LOTS 1 & 6 RECORDED UNDER RECORDING NO. 20000721001418.
- TEMPORARY CONSTRUCTION EASEMENT ALONG THE EAST BOUNDARY OF LOT 2 RECORDED UNDER RECORDING NO. 20000803000872.
- REIMBURSEMENT, TOLLING & STANDSTILL AGREEMENT AFFECTS LOT 4 RECORDED UNDER RECORDING NO. 20000628001265.
- TRACT A OF THE AMENDED EVERGREEN PLAZA IS FOR THE PURPOSE OF VEHICULAR AND PEDESTRIAN TRAFFIC ACCESS WITHIN THE PLAZA.



LINE	LENGTH	BEARING
L1	3.64	S00°48'38"E
L2	46.83	N44°16'48"E
L3	52.06	N00°20'53"W
L4	47.77	S24°24'39"W
L5	10.50	N65°35'21"W
L6	52.55	S24°24'39"W
L7	19.76	N72°04'08"W
L8	13.55	S65°35'21"E
L9	5.00	N65°35'21"W
L10	15.36	S24°24'39"W
L11	30.01	S24°24'39"W
L12	3.00	N65°35'21"W
L13	5.62	S24°24'35"W
L14	4.00	S79°44'11"E

CURVE	LENGTH	RADIUS	DELTA
C1	80.33	135.00	34°05'31"
C2	70.47	165.00	24°28'20"
C3	92.17	344.50	15°19'44"
C4	56.70	344.50	09°25'48"
C5	46.16	25.00	105°46'59"
C6	42.94	370.00	06°38'57"
C7	113.49	400.00	16°15'23"
C8	73.59	297.00	14°11'48"
C9	162.65	301.00	30°57'40"

- LEGEND
- SURFACE BRASS MONUMENT
  - SET 1/2" REBAR
  - ⊗ PK NAIL
  - FOUND REBAR & CAP OR IRON PIPE
  - ⊕ QUARTER CORNER
  - ⊗ SECTION CORNER



BSP LOT NO.	EXISTING LOT NO.	AREA-SF
LOT 1	LOT 1 OF PUD	5,535
LOT 2	LOT 2 OF PUD	22,663
LOT 3	LOT 3 OF PUD	16,533
LOT 4	LOT 4 OF PUD	37,078
LOT 5	TRACT "C" OF PUD	21,750
LOT 6	LOT 2 OF FWBLA 00-104493	341,390
LOT 7	LOT 1 OF FWBLA 00-104493	22,409
TRACT "A"	TRACT "B" OF PUD	51,797

DATE: FEBRUARY 1, 2003  
CITY FILE NO. 02-102953-SU

**TOUMA ENGINEERS & LAND SURVEYORS**  
6632 SOUTH 191ST PLACE, SUITE E-102 • KENT, WA 98032  
PHONE (425) 251-0665 • FAX (425) 251-0625

RESTRICTIVE COVENANT



The undersigned, Sea-Tac Plaza Limited Partnership, is the current owner of real property in King County, Washington, legally described in the attached Exhibit A, hereafter referred to as the "Site". The Site contains subsurface areas which were the subject of a voluntary independent remedial action commenced by the owners in 1992 to respond to releases of certain dry cleaning solvents. Following installation of a vapor extraction system to remove solvents from the soils at portions of the Site, it has been confirmed that residual concentrations of solvents at levels exceeding the Method A cleanup guidelines as published in the Model Toxics Control Act ("MTCA") Chapter 173-340 WAC remain in portions of the site as follows.

1. Soils at a depth of 5 to 6.5 feet at the location of Boring B-4, as illustrated in Figure 2 of the AGRA Environmental report dated December 22, 1994, contained levels of tetrachloroethene (PCE) at 1.3 parts per million. This area lies under the foundation of the former Y-Pay-Mor Dry Cleaners.
2. Soils at a depth of 6.5 to 8 feet at the location of Boring B-5 as shown on Figure 2 of the AGRA Environmental report dated December 22, 1994, contained elevated levels (71 PPM) of Cis-1, 2, Dichloroethene. Boring B-5 is located beneath the foundation of the former Y-Pay-Mor Dry Cleaners.
3. As a result of spills at the former Y-Pay-Mor Dry Cleaners, portions of the concrete foundations were removed. A soil vapor extraction system was installed to clean soils and the concrete foundation was replaced.
4. Groundwater contamination was identified in a single boring, known as Boring B-12, as shown in the December 22, 1994 AGRA report. This location is also located beneath the former Y-Pay-Mor Dry Cleaning facility.
5. As a result of the residual contamination left underneath the concrete foundation, it will be necessary to conduct semiannual sampling of existing monitoring wells over a three year period, commencing on the date of this document.

Sea-Tac Plaza Limited Partnership makes the following declaration as to limitations, restrictions, and uses to which the Site may be put, and specifies that such declarations shall constitute covenants to run with the land, as provided by law, and shall be binding on all parties and all persons claiming under it, including all current and future owners of any portion of or interest in the Site.

1. Any activity on the Site that may interfere with the ongoing monitoring of groundwater wells is prohibited. In addition, no groundwater underlying the Site may be taken for domestic purposes.

2. The Owner shall allow authorized representatives of the Department of Ecology, or from any successor agency, the right to enter the Site at reasonable times for the purpose of evaluating compliance with the monitoring of groundwater wells and the remedial action, and to take samples and to inspect records, as provided by law.

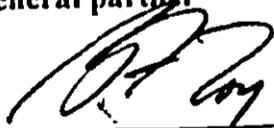
3. The Owner of the Site and the Owner's assigns and successors in interest, reserve the right under WAC 173-340-720 and WAC 173-340-440 to record an instrument which provides that this restrictive covenant shall no longer limit use of the Site or be of any further force and effect. However, such an instrument may be recorded only with the consent of the Department of Ecology, or of any successor agency. Public notice and comment may be sought by the Department of Ecology or its successor agency, prior to the recording of such an instrument.

DATED this 21 day of September, 1995.

**SEA-TAC PLAZA LIMITED PARTNERSHIP**

By: TRI-CENTER ASSOCIATES, a general partner

By: CASETA CORPORATION,  
a general partner

By:   
Printed Name: Bill E. Toy  
Its: Vice President

9510121424

**EXHIBIT A**

That portion of that certain development situated on Tracts A, B, and C and Lot 1 of Evergreen Plaza, as per Plat recorded in Volume 100 of Plats on page 74, records of King County, situate in County of King, State of Washington formerly known as Y-Pay-Mor Dry Cleaners

9510121424

9510121424

Scott Crossman  
444 3rd Ave  
Seattle WA 98104

980810-1434 03:26:00 PM KING COUNTY RECORDS 004 THS 11.00



Short Cressman & Burgess P.L.L.C.  
Attn: Scott M. Missall  
3000 First Interstate Center  
999 Third Avenue  
Seattle, WA 98104-4008

9808101434

<b>Document Title</b>	Declaration of Restrictive Covenant
<b>Reference Number(s) of Related Documents</b>	N/A
<b>Grantor</b>	SeaTac Plaza Corporation
<b>Grantee</b>	Evergreen Plaza, a Planned Unit Development
<b>Legal Description</b>	Space A-6, 2210 S. 320th Street, Federal Way, Washington, located within Lot 2, KCSP No. 1079107, Recording No. 7912260667, being a portion of Tract A, Evergreen Plaza, a Planned Unit Development, Plats Vol. 100, pages 74 and 75
<b>Parcel Number(s)</b>	242320-0050-00

### RESTRICTIVE COVENANT

#### SEATAC PLAZA CORPORATION

2210 S. 320th Street, Space A-6; Former Y-Pay -Mor Dry Cleaners

This Declaration of Restrictive Covenant is made pursuant to RCW 70.105D.030(1)(f) and (g) and WAC 173-340-440 by SEATAC PLAZA CORPORATION, its successors and assigns.

An independent remedial action (hereafter "Remedial Action") occurred at the property that is the subject of this Restrictive Covenant. The Remedial Action conducted at the property is described in the following documents:

Preliminary Remedial Investigation, by AGRA Earth and Environmental (formerly RZA AGRA), dated November 1992.

Remediation System Installation, by AGRA Earth and Environmental (formerly RZA AGRA), dated October 1993.

Soil Vapor Extraction Remediation System, Performance Monitoring Record, by AGRA Earth and Environmental (formerly RZA AGRA), dated February 7, 1994.

Independent Remedial Action Report, by AGRA Earth and Environmental (formerly RZA AGRA), dated December 22, 1994.

These documents are on file at the Northwest Regional Office of the State of Washington Department of Ecology (hereafter "Ecology").

This restrictive Covenant is required because the Remedial Action resulted in residual concentrations of two contaminants which exceed the Model Toxics Control Act (MTCA) cleanup levels in the soil in two specific locations located under the building foundation.

The undersigned, SEATAC PLAZA CORPORATION, is the fee owner of real property (hereafter "Property") in the County of King, State of Washington, that is subject of this Restrictive Covenant. The Property is legally described as follows:

That property commonly known as Space A-6, 2210 S. 320th Street, Federal Way, Washington, located within Lot 2 as delineated on King County short Plat No. 1079107, recorded under King County Recording No. 7912260667, being a portion of Tract A, Evergreen Plaza, a Planned Unit Development, according to the plat thereof recorded in Volume 100 of Plats, pages 74 and 75, in King County, Washington.

SEATAC PLAZA CORPORATION makes the following declaration as to limitations, restrictions, and uses to which the Property may be put and specifies that such declarations shall constitute covenants to run with the land, as provided by law and shall be binding on all parties and all persons claiming under them, including all current and future owners of any portion of or interest in the Property (hereafter "Owner").

9808101434

**Section 1.** A portion of the Property contains soil contaminated with cis-1,2-dichloroethene and tetrachloroethane, located under the building foundation at confirmation borings CB-4 and CB-5 as shown on Exhibit A. The Owner shall not alter, modify, or remove the existing structure(s) in any manner that may result in the release or exposure to the environment of that contaminated soil or create a new exposure pathway without prior written approval from Ecology.

**Section 2.** Any activity on the Property that may interfere with the integrity of the Remedial Action and continued protection of human health and the environment is prohibited.

**Section 3.** Any activity on the Property that may result in the release or exposure to the environment of a hazardous substance that remains on the Property as part of the Remedial Action, or create a new exposure pathway, is prohibited without prior written approval from Ecology.

**Section 4.** The Owner of the Property must give thirty (30) day advance written notice to Ecology of the Owner's intent to convey any interest in the Property. No conveyance of title, easement, lease, or other interest in the Property shall be consummated by the Owner without adequate and complete provision for continued monitoring, operation, and maintenance of the Remedial Action.

**Section 5.** The Owner must restrict leases to uses and activities consistent with the Restrictive Covenant and notify all lessees of the restrictions on the use of the Property.

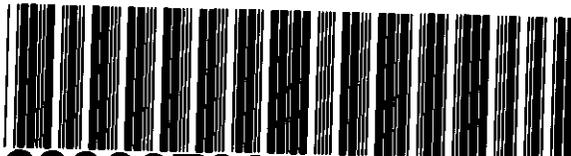
**Section 6.** The Owner must notify and obtain approval from Ecology prior to any use of the Property that is inconsistent with the terms of this Restrictive Covenant. Ecology may approve any inconsistent use only after public notice and comment.

**Section 7.** The Owner shall allow authorized representatives of Ecology the right to enter the Property at reasonable times for the purpose of evaluating the Remedial Action; to take samples, to inspect Remedial Actions conducted at the Property, and to inspect records that are related to the Remedial Action.

**Section 8.** The Owner of the Property reserves the right under WAC 173-340-440 to record an instrument that provides that this Restrictive Covenant shall no longer limit use of the Property or be of any further force or effect. However, such an instrument may be recorded only if Ecology, after public notice and opportunity for comment, concurs.

9808101434





20000703001131

COMMONWEALTH LAND TITLE  
PAGE 001 OF 013 20.00  
07/03/2000 15:32  
KING COUNTY, WA

Name Lundy's International

Address P.O. Box 256

City, State, Zip Dublin, OH 43017

**COMMONWEALTH**

LAND TITLE INSURANCE COMPANY  
OF PHILADELPHIA

COMMONWEALTH LAND TITLE  
REF: 405166-2

20

Document Title(s)

1 Declaration of Easements & Covenants

2 \_\_\_\_\_

\*\*\*\*\*

Reference Number(s) of Documents assigned or released

(Additional numbers on page \_\_\_\_\_ of document)

\*\*\*\*\*

Grantor(s) (Last name first, then first name and initials)

1 DOG II LLC

2 \_\_\_\_\_

3 Additional names on page \_\_\_\_\_ of document

\*\*\*\*\*

Grantee(s) (Last name first, then first name and initials)

1 Lundy's International

2 \_\_\_\_\_

3 Additional names on page \_\_\_\_\_ of document

\*\*\*\*\*

Legal Description (abbreviated i.e., lot, block, plat or section, township, range)

Lt 2 Sheet Pl 1079107 & Lt 1 Tr. B & C  
Evergreen PLAZA.

(Additional legal description on page \_\_\_\_\_ of document)

\*\*\*\*\*

Assessor's Property Tax Parcel/Account Number:

242320-0050-05/0010-09/0060-08/0067-06

(Additional account numbers on page \_\_\_\_\_ of document)

EXCISE TAX NOT REQUIRED

EXCISE TAX NOT REQUIRED

By King Co. Records Division

By [Signature] Deputy

2000 070 3001131

**DECLARATION OF EASEMENTS AND COVENANTS**

This DECLARATION OF EASEMENTS AND COVENANTS (hereinafter the "**Declaration**") is made and entered into this 20<sup>th</sup> day of June, 2000, by and between **DCG II, LLC**, a Washington limited liability company (hereinafter referred to as "**Grantor**"), whose mailing address is c/o Summit Properties, 25022 104<sup>th</sup> Avenue SE, Suite B, Kent, Washington 98031, and **WENDY'S INTERNATIONAL, INC.**, an Ohio corporation (hereinafter referred to as "**Grantee**"), whose mailing address is 4288 West Dublin-Granville Road, P O Box 256, Dublin, Ohio 43017

W I T N E S S E T H

WHEREAS, Grantor is the owner of that certain real property located in the State of Washington, County of Kent and City of Federal Way, as more particularly described in **Exhibit A** which is attached hereto and made a part hereof (which real property is hereinafter referred to as "**Grantor's Parcel**"), and

WHEREAS, Grantee is the owner of that certain real property located in the State of Washington, County of Kent and City of Federal Way, as more particularly described in **Exhibit B** which is attached hereto and made a part hereof (which real property is hereinafter referred to as "**Grantee's Parcel**"), and

WHEREAS, Grantor and Grantee desire to establish certain easements and covenants in connection with the use of their respective parcels

NOW, THEREFORE, in consideration of the sum of Ten Dollars (\$10 00) and other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged by Grantor, Grantor and Grantee agree as follows

2000 070 3001131

2000 070 3601131

1        Drive-Thru Area Easement Grantor hereby grants, conveys and delivers to Grantee, for the use and benefit of Grantee, its successors, assigns, licensees, suppliers, customers and employees, a non-exclusive, perpetual easement, appurtenant to Grantee's Parcel, for the purpose of parking, driveways, including the drive-through lane, trash enclosure, signage, and landscaping on that portion of Grantor's Parcel described on Exhibit C, attached hereto and made a part hereof, to be used in conjunction with Grantee's business on Grantee's Parcel. Grantee covenants and agrees to adequately maintain the Drive-Thru Area Easement in a level evenly-paved condition and at a grade level compatible to Grantee's Parcel and Grantor's Parcel.

2        Tract B Easement Grantor hereby grants, conveys and delivers to Grantee, for the use and benefit of Grantee, its successors, assigns, licensees, suppliers, customers and employees, a non-exclusive, perpetual easement, appurtenant to the Grantee's Parcel, for the purpose of parking and passenger vehicle, light truck, and pedestrian ingress, egress and access to and from Grantee's Parcel and 320<sup>th</sup> Street and 23<sup>rd</sup> Avenue, over, upon, across and through the area depicted as Tract B on the plat of Evergreen Plaza P U D Vol. 100-74/75, attached hereto as Exhibit D. Grantor covenants and agrees to adequately maintain the Tract B Easement area in a level, evenly-paved condition and at a grade level compatible to the Grantee's Parcel. In the event Grantor fails or refuses to adequately maintain said easement area after receiving reasonable notice from Grantee, Grantee shall have the option, but not the obligation, of performing the necessary maintenance and billing the reasonable cost thereof to Grantor. This easement shall include the right of Grantee to enter upon such other portions of Grantor's Parcel as are necessary for the purpose of maintaining said easement area.

3        Grantor's Parcel Easement Grantor hereby grants, conveys and delivers to Grantee, for the use and benefit of Grantee, its successors, assigns, licensees, suppliers, customers and employees, a non-exclusive, perpetual easement, appurtenant to the Grantee's Parcel, for driveway, vehicular and pedestrian ingress and egress and parking purposes over the common driveways, walkways and parking areas as they may exist from time to time within Grantor's Parcel. No buildings, fences, curbs or other obstructions prohibiting reasonable access between the Grantee's Parcel and Grantor's Parcel shall be constructed without the prior written approval of Grantee. Grantor, at Grantor's expense, shall be obligated to adequately maintain Grantor's Parcel.

TO HAVE AND TO HOLD the easements and rights unto Grantee, its successors and assigns forever. Grantor, for Grantor and Grantor's heirs, successors and assigns, hereby warrants and covenants with Grantee, its successors and assigns, that Grantor is the true and lawful owner in fee simple of Grantor's Parcel and has the right and full power to grant and convey the easement and rights herein granted, and that Grantor will

warrant and defend the easement and rights herein granted against all claims of all persons whomsoever

The above-described easements, restrictions and covenants shall be for the use and benefit of Grantee's Parcel and the owners from time to time of all or any part thereof All provisions of this Declaration, including the covenants, benefits and burdens, shall run with the land and be binding upon and inure to the heirs, executors, administrators, personal and/or legal representatives, successors, assigns and tenants of Grantee and Grantor The rule of strict construction shall not apply to this grant This grant shall be given a reasonable construction so that the intention of the parties to confer a commercially usable right of enjoyment on Grantee is carried out

IN WITNESS WHEREOF, this Declaration is executed as of the day and year first above written

Witnesses

DCG II, LLC

\_\_\_\_\_  
Print Name \_\_\_\_\_

By. \_\_\_\_\_

\_\_\_\_\_  
Print Name \_\_\_\_\_

WENDY'S INTERNATIONAL, INC.

*Darcy B. Mihal*  
Print Name **DARCY B. MIHAL**

By *George Condes*

*Joan M. Williams*  
Print Name **JOAN M. WILLIAMS**

Title **GEORGE CONDES  
Executive Vice President**

*Darcy B. Mihal*  
Print Name **DARCY B. MIHAL**  
*Joan M. Williams*  
Print Name **JOAN M. WILLIAMS**

By *W. Stephen Wirt*  
Title **W. STEPHEN WIRT  
Vice President**

Law Dept *SA*

2000 070 3601131

to grant and convey the easement and rights herein granted, and that Grantor will warrant and defend the easement and rights herein granted against all claims of all persons whomsoever

The above-described easements, restrictions and covenants shall be for the use and benefit of Grantee's Parcel and the owners from time to time of all or any part thereof All provisions of this Declaration, including the covenants, benefits and burdens, shall run with the land and be binding upon and inure to the heirs, executors, administrators, personal and/or legal representatives, successors, assigns and tenants of Grantee and Grantor The rule of strict construction shall not apply to this grant This grant shall be given a reasonable construction so that the intention of the parties to confer a commercially usable right of enjoyment on Grantee is carried out

IN WITNESS WHEREOF, this Declaration is executed as of the day and year first above written

Witnesses

DCG II, LLC

Amy Williams  
Print Name Amy Williams

By D. Michael Rennie

Print Name \_\_\_\_\_

WENDY'S INTERNATIONAL, INC.

Print Name \_\_\_\_\_

By \_\_\_\_\_

Print Name \_\_\_\_\_

Title \_\_\_\_\_

Print Name \_\_\_\_\_

By \_\_\_\_\_

Print Name \_\_\_\_\_

Title \_\_\_\_\_

Law Dept \_\_\_\_\_

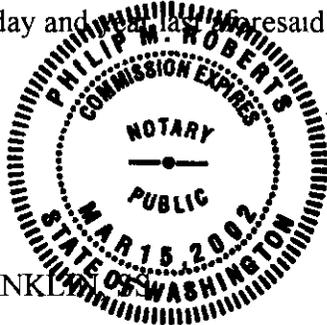
2000 070 3001131

STATE OF Washington  
COUNTY OF King, SS

The undersigned, a Notary Public in and for the above state and county, hereby certifies that on the 30th day of JUNE, 2000, before me personally appeared D. Michael Dunne, the Manager of DCG II, LLC, a Washington limited liability company, who was known to me as the person and officer described in and who executed the foregoing instrument on behalf of said corporation, and who acknowledged that he held the position or title set forth in the instrument and certificate, he signed the instrument on behalf of the corporation by proper authority, and the instrument was the act of the corporation for the purpose therein stated

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my official seal on the day and year aforesaid

(SEAL)



Philip M. Roberts

Notary Public

STATE OF OHIO  
COUNTY OF FRANKLIN

The undersigned, a Notary Public in and for the above state and county, hereby certifies that on the \_\_\_ day of \_\_\_\_\_, 2000, before me personally appeared \_\_\_\_\_ and \_\_\_\_\_, the

\_\_\_\_\_ respectively, of **WENDY'S INTERNATIONAL, INC.**, an Ohio corporation, who are known to me as the persons and officers described in and who executed the foregoing instrument on behalf of said corporation, and who acknowledge that they held the positions or titles set forth in the instrument and certificate, that they signed the instrument on behalf of the corporation by proper authority, and that the instrument was the act of the corporation for the purposes therein stated

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my official seal on the day and year last aforesaid

(SEAL)

\_\_\_\_\_  
Notary Public

2000 070 521131

STATE OF \_\_\_\_\_  
COUNTY OF \_\_\_\_\_, SS.

The undersigned, a Notary Public in and for the above state and county, hereby certifies that on the \_\_\_\_ day of \_\_\_\_\_, 2000, before me personally appeared \_\_\_\_\_, the \_\_\_\_\_ of DCG II, LLC, a Washington limited liability company, who was known to me as the person and officer described in and who executed the foregoing instrument on behalf of said corporation, and who acknowledged that he held the position or title set forth in the instrument and certificate, he signed the instrument on behalf of the corporation by proper authority, and the instrument was the act of the corporation for the purpose therein stated

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my official seal on the day and year last aforesaid

(SEAL)

\_\_\_\_\_  
Notary Public

STATE OF OHIO  
COUNTY OF FRANKLIN, SS

The undersigned, a Notary Public in and for the above state and county, hereby certifies that on the 29th day of June, 2000, before me personally appeared GEORGE SCARDIS and W. STEPHEN WIRT, the Executive Vice President and Vice President of WENDY'S INTERNATIONAL, INC., an Ohio corporation, who are known to me as the persons and officers described in and who executed the foregoing instrument on behalf of said corporation, and who acknowledge that they held the positions or titles set forth in the instrument and certificate, that they signed the instrument on behalf of the corporation by proper authority, and that the instrument was the act of the corporation for the purposes therein stated

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my official seal on the day and year last aforesaid



JOAN M WILLIAMS  
NOTARY PUBLIC, STATE OF OHIO  
MY COMMISSION EXPIRES SEPT 15, 2002

Joan M. Williams  
Notary Public  
1200 Weather Stone  
Washington, Ohio 43235

This instrument prepared by  
Stephen L Harper, Attorney at Law  
Wendy's International, Inc  
4288 West Dublin-Granville Road  
Dublin, Ohio 43017

2000 070 3001131

**EXHIBIT A**

**Parcel A:**

LOT 2, as delineated on King County Short Plat Number 1079107, recorded under recording number 7912260667, being a portion of Tract A, Evergreen Plaza, a Planned Unit Development, according to the plat thereof, recorded in Volume 100, of Plats, Pages 74 and 75, in King County, Washington

**Parcel B:**

Lot 1, and Tracts B and C, Evergreen Plaza, a Planned Unit Development, according to the plat thereof, recorded in Volume 100, of Plats, Pages 74 and 75, in King County, Washington,

Aka Tax Account Nos 242320-0050-05, 242320-0010-09, 242320-0060-08 and  
242320-0070-06

2020 070 3001131

**EXHIBIT B**

Situated in the County of King, State of Washington, and described as follows

Lot 1 of Short Plat No 1079107, recorded under Recording No 7912270667,  
records of King County, Washington

Aka 2216 South 320<sup>th</sup> Street, Federal Way, Washington  
Tax Account No 242320-0055-05

#42916 v1 - 1553 / Exhibit B - Declaration  
Grantee's Parcel

2000 079 3091131

# EXHIBIT C

JUNE 28, 2000  
PROJECT NO. 00013  
FEDERAL WAY, WA

## LEGAL DESCRIPTION

### DRIVE THRU AREA EASEMENT

THAT PORTION OF LOT 2 OF SHORT PLAT NO. 1079107, RECORDED UNDER RECORDING NO. 7912270667, RECORDS OF KING COUNTY, WASHINGTON, DESCRIBED AS FOLLOWS:

BEGINNING AT THE NORTHWEST CORNER OF LOT 1 OF SHORT PLAT NO. 1079107, RECORDED UNDER RECORDING NO. 7912270667, SAID CORNER BEING A COMMON CORNER WITH LOT 2 OF SAID SHORT PLAT;  
THENCE SOUTH 89°34'08" EAST ALONG THE LINE COMMON TO LOTS 1 AND 2 OF SAID SHORT PLAT A DISTANCE OF 147.86 FEET TO THE SOUTHEAST CORNER OF SAID LOT 2;  
THENCE NORTH 00°25'52" EAST ALONG THE EAST LINE OF SAID LOT 2 A DISTANCE OF 50.00 FEET;  
THENCE NORTH 89°34'08" WEST PARALLEL TO THE SOUTH LINE OF SAID LOT 2 A DISTANCE OF 147.86 FEET,  
THENCE SOUTH 00°25'52" WEST 50.00 FEET TO THE POINT OF BEGINNING.

2000 070 3061131



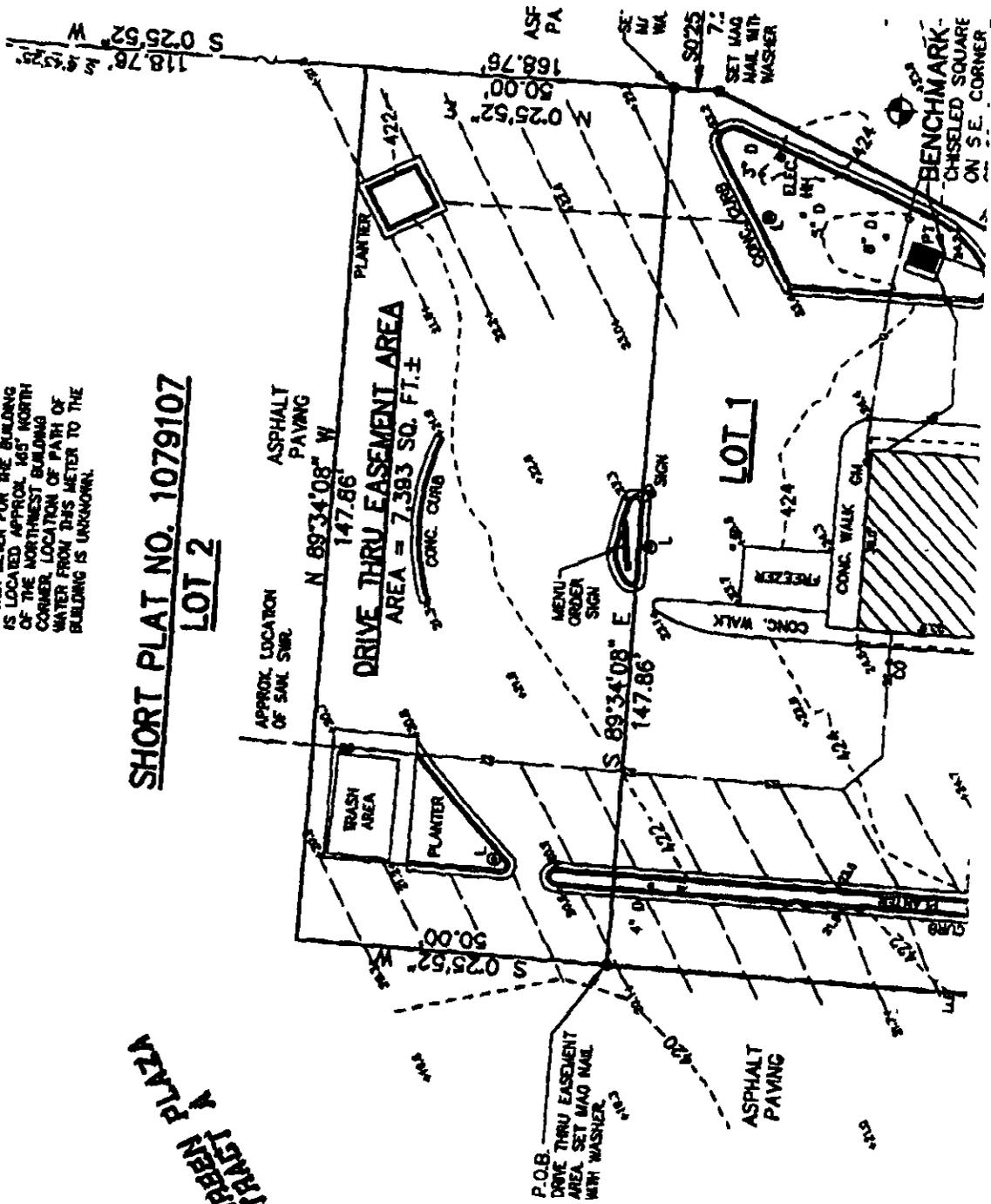
*Handwritten signature*  
06/28/00

2000 070 3001131

NOTE:  
WATER METER FOR THE BUILDING  
IS LOCATED APPROX. 165' NORTH  
OF THE NORTHWEST BUILDING  
CORNER. LOCATION OF PATH OF  
WATER FROM THIS METER TO THE  
BUILDING IS UNKNOWN.

**SHORT PLAT NO. 1079107**  
**LOT 2**

**GREEN PLAZA**  
**TRACT A**



**EXHIBIT C**

JUNE 28, 2000  
PROJECT NO. 00013  
FEDERAL WAY, WA

**LEGAL DESCRIPTION**

**DRIVE THRU AREA EASEMENT**

THAT PORTION OF LOT 2 OF SHORT PLAT NO. 1079107, RECORDED UNDER  
RECORDING NO. 7913270667, RECORDS OF KING COUNTY, WASHINGTON,  
DESCRIBED AS FOLLOWS:

# EVERGREEN PLAZA

A PLANNED UNIT DEVELOPMENT  
SECTION 9, TOWNSHIP 21N, RANGE 4E, W.M.  
KING COUNTY, WASHINGTON

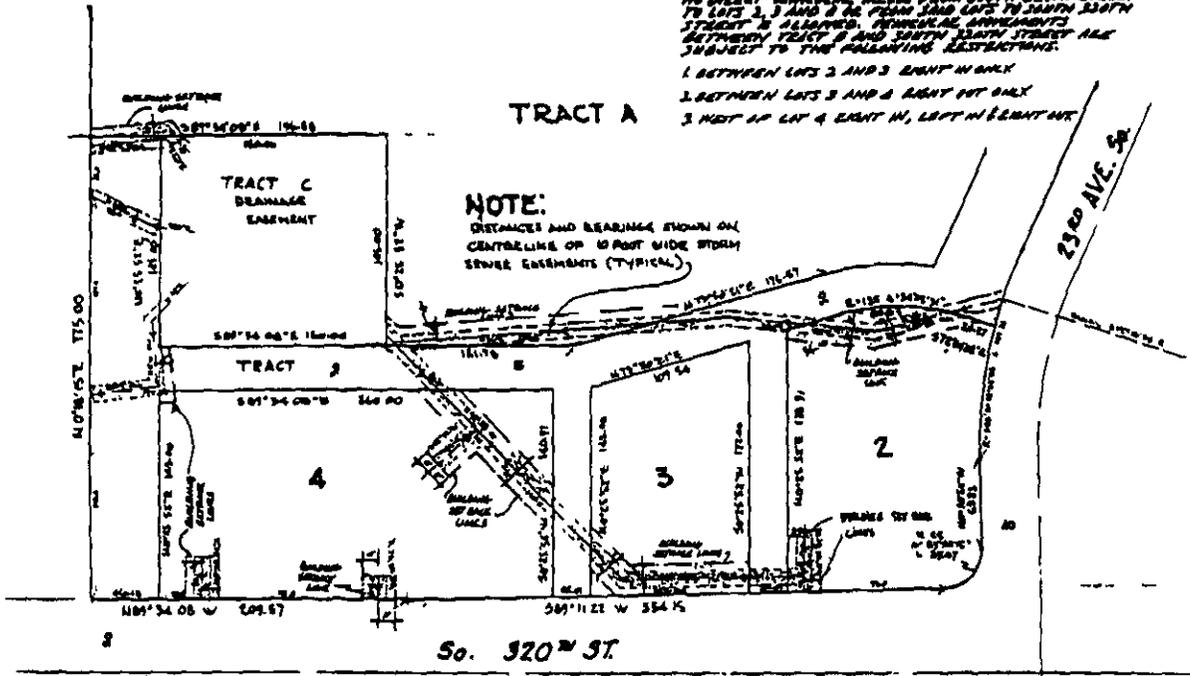
7606300834 100/74

BUSH ROAD & MITCHINGS, RS.

**ACCESS NOTES:**

AN EASEMENT WHICH ALLOWS ACCESS FROM SOUTH 32<sup>ND</sup> STREET TO LOTS 2, 3 AND 4 IS FROM LOTS 2 TO SOUTH 32<sup>ND</sup> STREET IS ALLOWED. FUTURE EASEMENTS BETWEEN TRACT 2 AND SOUTH 32<sup>ND</sup> STREET ARE SUBJECT TO THE FOLLOWING RESTRICTIONS:

1. BETWEEN LOTS 2 AND 3 RIGHT WAY ONLY
2. BETWEEN LOTS 3 AND 4 RIGHT WAY ONLY
3. WEST OF LOT 4 RIGHT WAY, LEFT IN EASEMENT



**STORM SEWER EASEMENT DETAIL**  
SCALE 1" = 50'

**Acknowledgment:**

STATE OF WASHINGTON,  
COUNTY OF KING  
This is to certify that on the 23<sup>rd</sup> day of August 1976, before me the undersigned, a Notary Public, Personally appeared William A. Sikes, Arthur W. Mitchings, Jr., and Robert M. Sikes, of Pacific National Bank of Washington, a Washington Corporation, to me known to be the individuals who executed the within dedication and acknowledged to me that they signed and sealed the same as their voluntary act and deed for the uses and purposes therein mentioned, and on both stated that they were authorized to execute said instrument and that the seal affixed is the Corporate seal of said Corporation. WITNESS my hand and seal the day and year first above written.

William A. Sikes  
NOTARY PUBLIC for the STATE OF WASHINGTON  
Residing at Seattle

**DEDICATION**

I, Arthur W. Mitchings, Jr., SECRETARY OF BUSH ROAD AND MITCHINGS, R.S., INC., A WASHINGTON CORPORATION, DO HEREBY DEDICATE TO THE USE OF THE PUBLIC THE FOLLOWING ALL STREETS AND AVENUES SHOWN HEREON AND THE USE THEREOF FOR ALL PUBLIC PURPOSES AND THE USE THEREOF FOR ALL NECESSARY SERVICES, ALTHOUGH RIGHT HERE AND THERE SHOWN ON THIS PLAN BY THE DENIAL OF REASONABLE READINGS OF THE STREETS AND AVENUES SHOWN HEREON.

IN WITNESS WHEREOF WE HAVE SET OUR HANDS AND SEALS THIS 23<sup>RD</sup> DAY OF AUGUST, 1976.  
BUSH ROAD AND MITCHINGS, R.S., INC., A WASHINGTON CORPORATION  
Arthur W. Mitchings, Jr.  
ARTHUR W. MITCHINGS, SECRETARY

**ACKNOWLEDGEMENT**

STATE OF WASHINGTON,  
COUNTY OF KING  
This is to certify that on the 23<sup>rd</sup> day of August 1976 before me the undersigned, a Notary Public, Personally appeared Arthur W. Mitchings, Jr., SECRETARY OF BUSH ROAD AND MITCHINGS, R.S., INC., a Washington Corporation, and Robert M. Sikes, a Washington Corporation, to me known to be the individuals who executed the within dedication and acknowledged to me that they signed and sealed the same as their voluntary act and deed for the uses and purposes therein mentioned, and on both stated that they were authorized to execute said instrument and that the seal affixed is the Corporate seal of said Corporation. WITNESS my hand and seal the day and year first above written.

Robert M. Sikes  
NOTARY PUBLIC for the STATE OF WASHINGTON  
Residing at Seattle

**EXHIBIT D**

2000 070 3001131

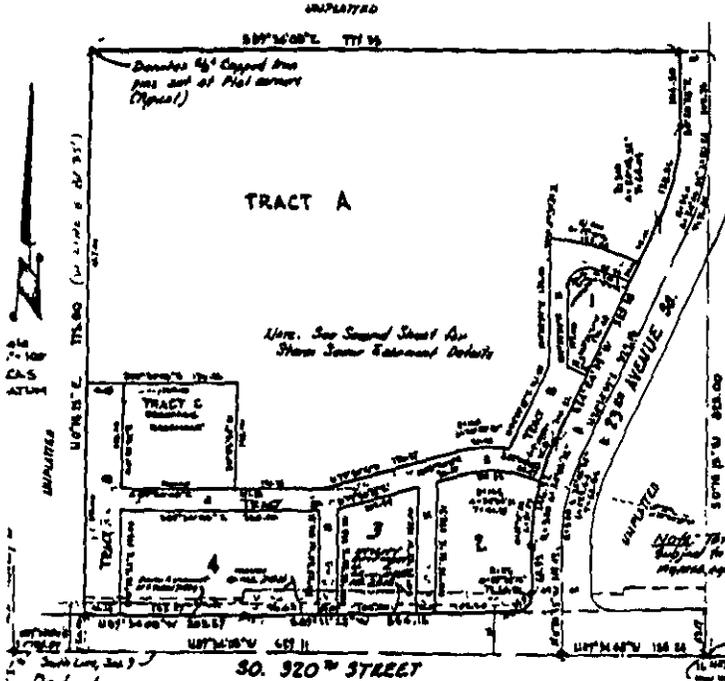
# EVERGREEN PLAZA

7608300834 100%

A PLANNED UNIT DEVELOPMENT  
SECTION 9, TOWNSHIP 21N, RANGE 4E, W.M.  
KING COUNTY, WASHINGTON

BUSH ROAD & HITCHINGS, R.S. 1

## EXHIBIT D



**Surveyor's Certificate**  
I hereby certify that this plat of EVERGREEN PLAZA is based upon an actual survey in Section 9, Township 21N, Range 4E, W.M., that the corners and distances are shown correctly thereon, that the monument will be set and the lot and sub-corners staked correctly on the ground and that I have fully complied with the provisions of the platting regulations.



Robert J. Hatcher  
Surveyor, State of Washington  
Professional License No. 12345

**Comptroller's Certificate**  
I hereby certify that all property taxes are paid, that there are no delinquent special assessments certified to this office for collection and that all special assessments certified to this office for collection on any of the property shown on this plat, dedicated as streets, shops or for other public use, are paid in full. This 22nd day of August, 1976.

Office of the Comptroller  
King County, Washington

**Restrictions:**  
No lot or portion of a lot shall be divided and subdivided, ownership changed or transferred whereby the ownership of a portion of this plat shall be less than the area required for one district in which located.

**APPROVALS**  
Examined and approved this 25th day of August, 1976  
Department of Public Works  
[Signature]

Examined and approved this 26th day of August, 1976  
Department of Planning & Community Development  
[Signature]

Examined and approved this 27th day of August, 1976  
Department of Assessments  
HARLEY H. HOPPE  
[Signature]

Examined and approved this 28th day of August, 1976  
King County Council  
[Signature]

**Recording Certificate**  
Filed for record at the request of the King County Council this \_\_\_\_\_ day of \_\_\_\_\_, 1976, at \_\_\_\_\_ o'clock \_\_\_\_\_ M and recorded in Volume \_\_\_\_\_ of RC page \_\_\_\_\_, records of King County, Washington  
Division of Records & Elections

**Dedication**  
BY AND FOR THE USE OF ALL MEN BY THESE PRESENTS, that we, the undersigned owners in the simple of the land hereby platted, do hereby dedicate this plat and each note in the use of the public (except as otherwise shown hereon) and the use thereof for all public purposes not inconsistent with the use thereof for public highway purposes, also the right to make all necessary changes for utility and other purposes shown on this plat on the original reasonable grading of the streets and easements shown hereon.

**Acknowledgments.**  
STATE OF WASHINGTON  
COUNTY OF KING  
I, BETSY H. SUTTON, do hereby certify that on the 19th day of June, 1976, before me, the undersigned, a Notary Public, personally appeared Donald Ferguson, Robert Johnson, General Partner of Evergreen Federal Plaza Associates, a California Limited Partnership by S.A.B. Investments, Ferguson Associates, Pacific National Bank of Washington, and [Signature], Vice President, and they signed and acknowledged to me that they signed and created the same as their voluntary and lawful act for the purpose and consideration therein expressed and that they intended the same to be binding and enforceable in law and equity.

**NOTARIAL SEAL**  
BETSY H. SUTTON  
Notary Public, State of Washington  
My Commission Expires 12/31/77

**Description**  
This plat is a subdivision of the land shown on the plat of Section 9, Township 21N, Range 4E, W.M., King County, Washington, and is subject to the provisions of the Planned Unit Development Act, Chapter 21A RCW, and the rules and regulations thereunder. The land shown on this plat is to be used for the purposes shown on the plat and is to be subject to the provisions of the Planned Unit Development Act, Chapter 21A RCW, and the rules and regulations thereunder.

2000 070 3001131



REVISED

**BOUNDARY LINE ADJUSTMENT  
NO. BLA 00-104493  
CITY OF FEDERAL WAY  
KING COUNTY, WASHINGTON**

**KING COUNTY HEALTH DEPARTMENT**

EXAMINED AND APPROVED THIS \_\_\_\_\_ DAY OF \_\_\_\_\_ 20\_\_

NAME \_\_\_\_\_

**AUTHORIZATION**

THIS BOUNDARY LINE ADJUSTMENT IS MADE WITH THE FREE CONSENT AND IN ACCORDANCE WITH THE DESIRES OF THE OWNERS OF THE AFFECTED PROPERTIES.

NAME John T. Schwesler DATE 11/06/00  
WENDY'S INTERNATIONAL, INC.  
Chief Executive Officer & President  
NAME D. Michael Dunne DATE 12/12/00  
BCG II, LLC

NAME \_\_\_\_\_ DATE \_\_\_\_\_  
NAME \_\_\_\_\_ DATE \_\_\_\_\_

STATE OF Ohio  
COUNTY OF Franklin SS

I CERTIFY THAT I KNOW OR HAVE SATISFACTORY EVIDENCE THAT John T. Schwesler, CEO & Pres. of Wendy's Int'l, Inc. SIGNED THIS INSTRUMENT AND ACKNOWLEDGED IT TO BE (HIS/HER) FREE AND VOLUNTARY ACT FOR THE USES AND PURPOSES MENTIONED IN THE INSTRUMENT.

SIGNATURE OF Joan M. Williams  
NOTARY PUBLIC  
PRINTED NAME Joan M. Williams  
DATED November 6, 2000  
MY APPOINTMENT EXPIRES 9-15-2002

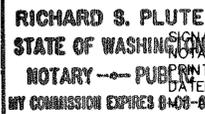


JOAN M. WILLIAMS  
NOTARY PUBLIC, STATE OF OHIO  
MY COMMISSION EXPIRES SEPT. 15, 2002

STATE OF WA  
COUNTY OF KING SS

I CERTIFY THAT I KNOW OR HAVE SATISFACTORY EVIDENCE THAT D. MICHAEL DUNNE SIGNED THIS INSTRUMENT AND ACKNOWLEDGED IT TO BE (HIS/HER) FREE AND VOLUNTARY ACT FOR THE USES AND PURPOSES MENTIONED IN THE INSTRUMENT.

SIGNATURE OF Richard S. Plute  
NOTARY PUBLIC  
PRINTED NAME RICHARD S. PLUTE  
DATED 12-12-00  
MY COMMISSION EXPIRES 8-08-01



**APPROVALS:  
CITY OF FEDERAL WAY**

EXAMINED AND APPROVED THIS 12<sup>th</sup> DAY OF February 2001  
Ken Miller  
DIRECTOR, PUBLIC WORKS

EXAMINED AND APPROVED THIS 12<sup>th</sup> DAY OF February 2001  
Kathy McClung  
DIRECTOR OF COMMUNITY DEVELOPMENT SERVICES

**KING COUNTY  
DEPARTMENT OF ASSESSMENTS**

EXAMINED AND APPROVED THIS 13<sup>th</sup> DAY OF February 2001  
Scott Noble  
ASSESSOR  
Russell Scheidtm  
DEPUTY ASSESSOR  
242320-0050 & -0055  
ACCOUNT NUMBER

**RECORDING NO.**

20010215900003

**VOL./PAGE**

143 88

**SCALE:**

1 INCH = 60 FEET

**PORTION OF:**

**S.E. 1/4 OF S.W. 1/4, S. 9, T. 21 N., R. 4 E., W.M.**

**LEGAL DESCRIPTIONS - BEFORE BOUNDARY LINE ADJUSTMENT**

**PARCEL 1**

LOT 1 OF SHORT PLAT NO. 1079107, RECORDED UNDER RECORDING NO. 7912270667, RECORDS OF KING COUNTY, WASHINGTON.

**PARCEL 2**

LOT 2 OF SHORT PLAT NO. 1079107, RECORDED UNDER RECORDING NO. 7912270667, RECORDS OF KING COUNTY, WASHINGTON.

**LEGAL DESCRIPTIONS - AFTER BOUNDARY LINE ADJUSTMENT**

**PARCEL 1**

LOT 1 OF SHORT PLAT NO. 1079107, RECORDED UNDER RECORDING NO. 7912270667, RECORDS OF KING COUNTY, WASHINGTON;

TOGETHER WITH THAT PORTION OF LOT 2 OF SHORT PLAT NO. 1079107, RECORDED UNDER RECORDING NO. 7912270667, RECORDS OF KING COUNTY, WASHINGTON, DESCRIBED AS FOLLOWS:

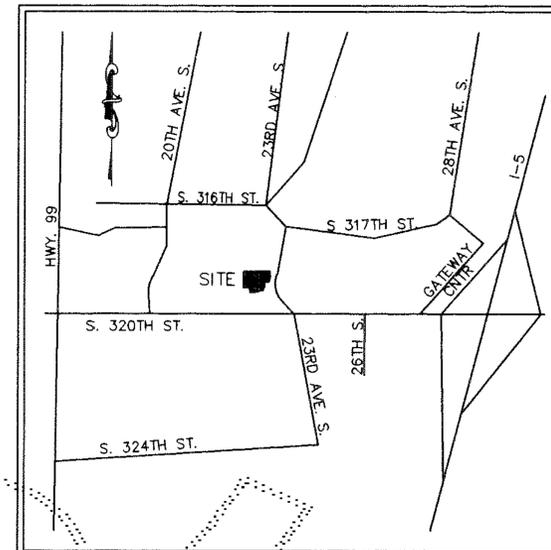
BEGINNING AT THE NORTHWEST CORNER OF LOT 1 OF SHORT PLAT NO. 1079107, RECORDED UNDER RECORDING NO. 7912270667, SAID CORNER BEING A COMMON CORNER WITH LOT 2 OF SAID SHORT PLAT; THENCE SOUTH 89°34'08" EAST ALONG THE LINE COMMON TO LOTS 1 AND 2 OF SAID SHORT PLAT A DISTANCE OF 147.86 FEET TO THE SOUTHEAST CORNER OF SAID LOT 2; THENCE NORTH 00°25'52" EAST ALONG THE EAST LINE OF SAID LOT 2 A DISTANCE OF 50.00 FEET; THENCE NORTH 89°34'08" WEST PARALLEL TO THE SOUTH LINE OF SAID LOT 2 A DISTANCE OF 147.86 FEET; THENCE SOUTH 00°25'52" WEST 50.00 FEET TO THE POINT OF BEGINNING.

**PARCEL 2**

LOT 2 OF SHORT PLAT NO. 1079107, RECORDED UNDER RECORDING NO. 7912270667, RECORDS OF KING COUNTY, WASHINGTON;

EXCEPT THAT PORTION DESCRIBED AS FOLLOWS:

BEGINNING AT THE NORTHWEST CORNER OF LOT 1 OF SHORT PLAT NO. 1079107, RECORDED UNDER RECORDING NO. 7912270667, SAID CORNER BEING A COMMON CORNER WITH LOT 2 OF SAID SHORT PLAT; THENCE SOUTH 89°34'08" EAST ALONG THE LINE COMMON TO LOTS 1 AND 2 OF SAID SHORT PLAT A DISTANCE OF 147.86 FEET TO THE SOUTHEAST CORNER OF SAID LOT 2; THENCE NORTH 00°25'52" EAST ALONG THE EAST LINE OF SAID LOT 2 A DISTANCE OF 50.00 FEET; THENCE NORTH 89°34'08" WEST PARALLEL TO THE SOUTH LINE OF SAID LOT 2 A DISTANCE OF 147.86 FEET; THENCE SOUTH 00°25'52" WEST 50.00 FEET TO THE POINT OF BEGINNING.



**VICINITY MAP**

1" = 1/4 MILE

**NOTES**

- 1. THE SURVEY WAS ACCOMPLISHED BY FIELD TRAVERSE METHOD THROUGH THE MONUMENTS SHOWN USING A 05" TOTAL STATION THEODOLITE (LEICA TCA1105).
- 2. THE SURVEY MEETS OR EXCEEDS THE ACCURACY REQUIREMENTS OF WAC 332-130-090.
- 3. REFERENCE PLAT OF EVERGREEN PLAZA, VOL. 100, P. 74-75.
- 4. REFERENCE KING COUNTY SHORT PLAT NO. 1079107, REC. NO. 7912270667.
- 5. REFERENCE SURVEY RECORDED UNDER REC. NO. 7611129011.
- 6. REFERENCE SURVEY RECORDED UNDER REC. NO. 7803179022.
- 7. REFERENCE SURVEY RECORDED UNDER REC. NO. 8503259001.
- 8. REFERENCE SURVEY RECORDED UNDER REC. NO. 9304159002.

VOL./PAGE

**RECORDER'S CERTIFICATE**

FILED FOR RECORD THIS 15 DAY OF Feb, 2001 AT 10:30 A.M. IN BOOK 173 OF SURVEYS AT PAGE 88 AT THE REQUEST OF Tim Hanson

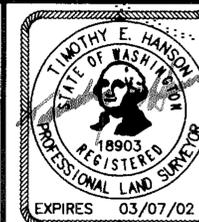
Bob Burns MANAGER Walt Washburn SUPT. OF RECORDS

**LAND SURVEYOR'S CERTIFICATE**

THIS BOUNDARY LINE ADJUSTMENT CORRECTLY REPRESENTS A SURVEY BY ME OR UNDER MY SUPERVISION IN CONFORMANCE WITH THE REQUIREMENTS OF THE APPROPRIATE STATE AND CITY STATUTE AND ORDINANCE IN Aug., 2000.

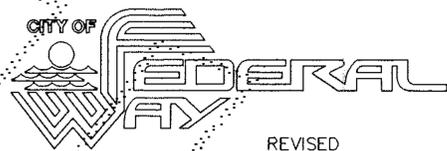
Timothy E. Hanson  
CERTIFICATE NO. 18903

**TIM HANSON AND ASSOCIATES**  
6025 108TH AVENUE N.E.  
KIRKLAND, WA 98033  
425-822-7271



**BOUNDARY LINE ADJUSTMENT FOR  
WENDY'S INTERNATIONAL, INC.**

DWN. BY TEH	DATE AUG. 2000	JOB NO. 00013
CHKD. BY TEH	SCALE	SHEET OF 2



REVISED

**BOUNDARY LINE ADJUSTMENT  
NO. BLA 00-104493  
CITY OF FEDERAL WAY  
KING COUNTY, WASHINGTON**

K.C.A.S. MERIDIAN

**CORNER LEGEND**

1. SET 5/8" REBAR AND CAP; L.S. 18903.
2. SET MAG NAIL WITH WASHER; L.S. 18903.
3. SET MAG NAIL WITH WASHER; L.S. 18903.
4. SET MAG NAIL WITH WASHER; L.S. 18903.
5. SET MAG NAIL WITH WASHER; L.S. 18903.
6. SET 5/8" REBAR AND CAP; L.S. 18903.

**LOT AREAS BEFORE B.L.A.**

LOT 1 - 15,016± SQ. FT.  
LOT 2 - 352,494± SQ. FT.

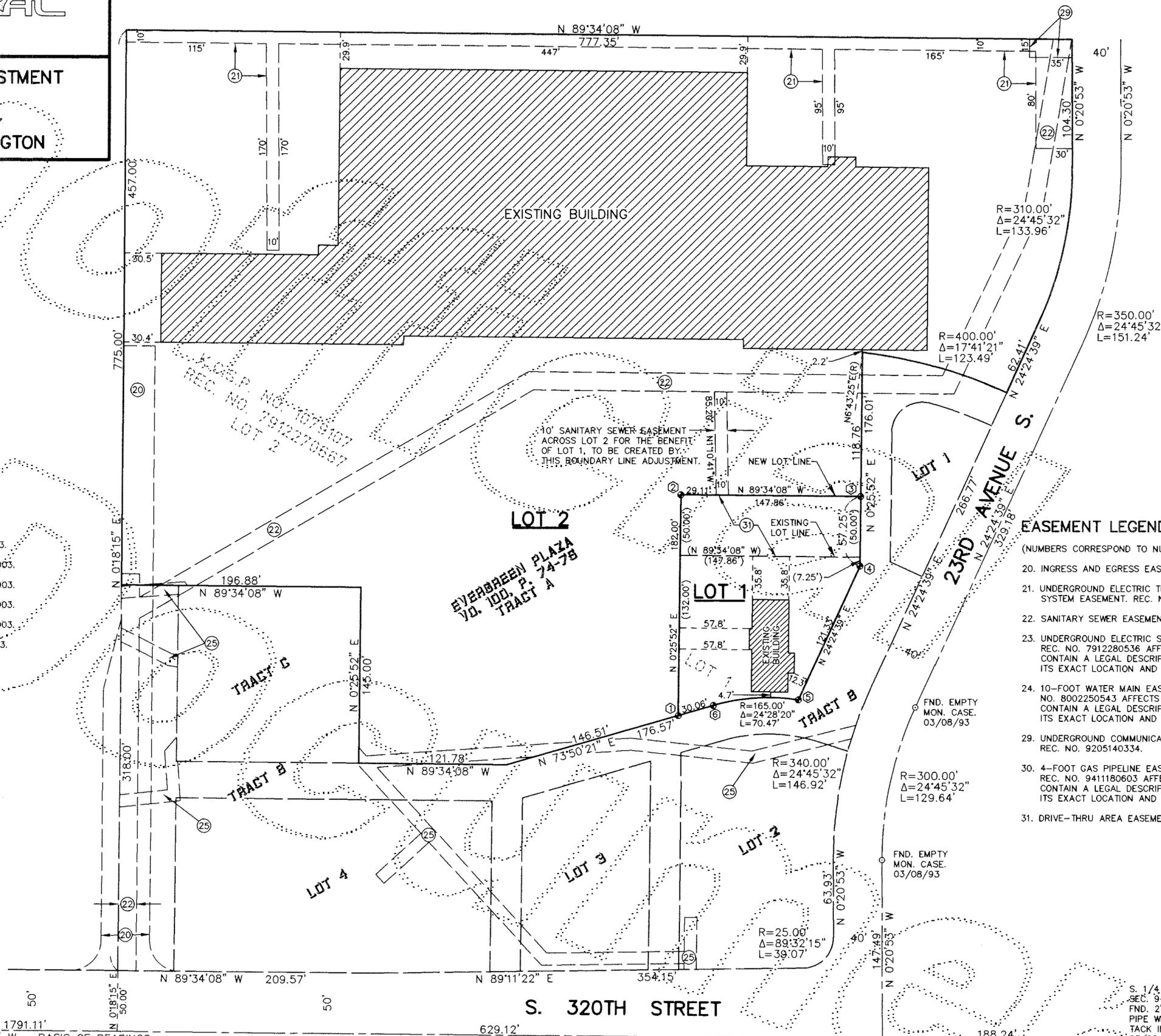
**LOT AREAS AFTER B.L.A.**

LOT 1 - 22,409± SQ. FT.  
LOT 2 - 345,101± SQ. FT.

**TAX LOT NUMBERS**

LOT 1 - 242320-0055-05  
LOT 2 - 242320-0050-00

FND. CONC. MON.  
WITH COPPER TACK  
IN MON. CASE, 2.24'  
WEST OF S.W. COR.  
OF SEC. 9-21-4;  
03/08/93.



VOL./PAGE

RECORDING NO.

SCALE: 1 INCH = 60 FEET

PORTION OF:

S.E. 1/4 OF S.W. 1/4, S. 9, T. 21 N., R. 4 E., W.M.

**EASEMENT LEGEND**

- (NUMBERS CORRESPOND TO NUMBERS IN TITLE REPORT)
20. INGRESS AND EGRESS EASEMENT. REC. NO. 7709220881.
  21. UNDERGROUND ELECTRIC TRANSMISSION AND/OR DISTRIBUTION SYSTEM EASEMENT. REC. NO. 7902070655.
  22. SANITARY SEWER EASEMENT. REC. NO. 7905080915.
  23. UNDERGROUND ELECTRIC SYSTEM EASEMENT RECORDED UNDER REC. NO. 7912280536 AFFECTS PARCEL 1. IT DOES NOT CONTAIN A LEGAL DESCRIPTION SUFFICIENT TO DETERMINE ITS EXACT LOCATION AND THEREFOR CANNOT BE PLOTTED.
  24. 10-FOOT WATER MAIN EASEMENT RECORDED UNDER REC. NO. 8002250543 AFFECTS PARCELS 1 AND 2. IT DOES NOT CONTAIN A LEGAL DESCRIPTION SUFFICIENT TO DETERMINE ITS EXACT LOCATION AND THEREFOR CANNOT BE PLOTTED.
  29. UNDERGROUND COMMUNICATIONS LINE EASEMENT. REC. NO. 9205140334.
  30. 4-FOOT GAS PIPELINE EASEMENT RECORDED UNDER REC. NO. 9411180603 AFFECTS PARCEL 1. IT DOES NOT CONTAIN A LEGAL DESCRIPTION SUFFICIENT TO DETERMINE ITS EXACT LOCATION AND THEREFOR CANNOT BE PLOTTED.
  31. DRIVE-THRU AREA EASEMENT. REC. NO. 20000703001131.

BLA2.DWG

VOL./PAGE

**RECORDER'S CERTIFICATE**

FILED FOR RECORD THIS \_\_\_\_ DAY OF \_\_\_\_\_ 20\_\_  
AT \_\_\_\_ M. IN BOOK \_\_\_\_ OF SURVEYS AT PAGE \_\_\_\_  
AT THE REQUEST OF \_\_\_\_\_

\_\_\_\_\_  
MANAGER

\_\_\_\_\_  
SUPT. OF RECORDS

**LAND SURVEYOR'S CERTIFICATE**

THIS BOUNDARY LINE ADJUSTMENT CORRECTLY REPRESENTS A SURVEY BY ME OR UNDER MY SUPERVISION IN CONFORMANCE WITH THE REQUIREMENTS OF THE APPROPRIATE STATE AND CITY STATUTE AND ORDINANCE IN \_\_\_\_\_, 2000.

*Timothy E. Hanson*  
CERTIFICATE NO. 18903

**TIM HANSON AND ASSOCIATES**  
6025 108TH AVENUE N.E.  
KIRKLAND, WA 98033  
425-822-7271

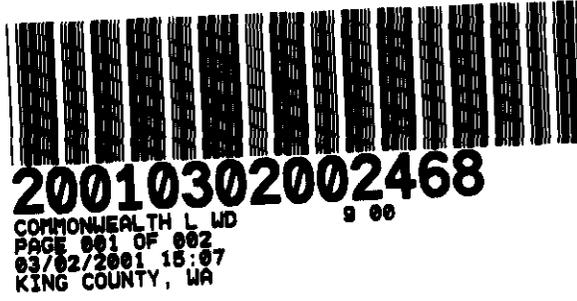


**BOUNDARY LINE ADJUSTMENT FOR WENDY'S INTERNATIONAL, INC.**

DWN. BY TEH	DATE AUG. 2000	JOB NO. 00013
CHKD. BY TEH	SCALE 1" = 60'	SHEET 2 OF 2

WHEN RECORDED RETURN TO

Wendy's International, Inc  
Legal Department / Jo Williams  
4288 W Dublin Granville Road  
Dublin, Ohio 43017



**E1803591**  
03/02/2001 14 46  
KING COUNTY, WA  
TAX \$2.00  
SALE \$8.00

PAGE 001 OF 002

COMMONWEALTH LAND TITLE

REP. 905393-2 ⑤

q/c

**GENERAL WARRANTY DEED**

This indenture made the 31<sup>st</sup> day of January, 2000, by DCG II, LLC, a Washington Limited Liability Company, whose principal address and place of business is c/o Summit Properties, 25022 104<sup>th</sup> Avenue SE, Suite B, Kent, Washington, 98031, hereinafter referred to as "Grantor", to WENDY'S INTERNATIONAL, INC., an Ohio corporation, whose principal address and place of business is 4288 W Dublin-Granville Road, Dublin, Ohio 43017, hereinafter referred to as "Grantee"

Witnesseth That Grantor, for and in consideration of the sum of Ten Dollars (\$10 00) and other good and valuable consideration in hand paid by Grantee, the receipt and sufficiency of which is hereby acknowledged, conveys and warrants to Grantee, its successors and assigns, all that certain real estate situated in the City of Federal Way, County of King, State of Washington (hereinafter known as the "Real Property"), to wit

That portion of Lot 2 of Short Plat No 1079107, recorded under recording No 7912270667, records of King County, Washington, described as follows

Beginning at the northwest corner of Lot 1 of Short Plat No 1079107, recorded under Recording No 7912270667, said corner being a common corner with Lot 2 of said Short Plat,

Thence South 89°34'08" East along the line common to Lots 1 and 2 of said Short Plat a distance of 147 86 feet to the southeast corner of said Lot 2,

Thence North 00°25'52" East along the east line of said Lot 2 a distance of 50 00 feet,

Thence North 89°34'08" West parallel to the south line of said Lot 2 a distance of 147 86 feet,

Thence South 00°25'52" West 50 00 feet to the point of beginning

(Being known as a portion of Lot 1, City of Federal Way Boundary Line Adjustment No BLA 00-104493, recorded under Recording No 20010215900003 in King County, Washington )

**AKA Tax Account Number: 242320-0050-00 (PORTION)**

Being part of the real estate transferred to Grantor from Sea-Tac Plaza Corporation, a Delaware corporation, by Deed, dated December 28, 1998, recorded December 29, 1998, as Instrument Number #9812291646, Auditor's Office, King County, Washington

2001 030 2002468

**SUBJECT TO** zoning ordinances, legal highways, restrictions, reservations, conditions and easements of record, matters of survey, and real property taxes and assessments for the current and subsequent years

Grantor hereby **RESERVES** to itself, for the use and benefit of Grantor, its successors, assigns, invitees, customers and employees a non-exclusive perpetual easement over the driveways as they may exist from time to time on the Real Property for the passage of passenger vehicles and light trucks only Grantor's use of the driveways on the Real Property shall in no way interfere with Grantee's drive-thru and pick-up window or stacking lane or impede the conduct of Grantee's business

Dated this 29 day of JANUARY, <sup>2001</sup>~~2000~~

**DCG II, LLC**, a Washington limited liability company

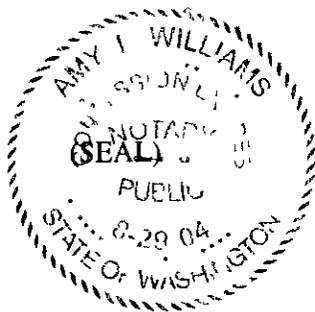
By D. Michael Dunne  
Name D Michael Dunne  
Title Managing Member

STATE OF WASHINGTON,  
COUNTY OF King, SS

2001 030 2002768

The undersigned, a Notary Public in and for the above state and county, hereby certifies that on the 29<sup>th</sup> day of January, 2001, 2000, before me personally appeared D Michael Dunne, Managing Member of **DCG II, LLC**, a Washington Limited Liability Company, who is known to me as the person and managing member described in and who executed the foregoing instrument on behalf of said company, and who acknowledge that he held the position or title set forth in the instrument and certificate, that he signed the instrument on behalf of the company by proper authority, and that the instrument was the act of the company for the purposes therein stated

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my official seal on the day and year last aforesaid



Amy L. Williams  
Notary Public  
Name Amy L. Williams  
Residence Buckley, WA 98321  
Expiration 8/29/04

THIS INSTRUMENT PREPARED BY

Stephen Harper, Attorney at Law  
WENDY'S INTERNATIONAL, INC  
4288 W Dublin-Granville Road  
Dublin, Ohio 43017

**RETURN ADDRESS:**  
Philip M Roberts, Esq.  
Ryan, Swanson & Cleveland, PLLC  
1201 Third Avenue, Suite 3400  
Seattle, WA 98101-3034



**DECLARATION OF EASEMENTS AND COVENANTS**

GRANTOR	DCG II, LLC	42154 F.A.T. 426 DEC 30 2003
GRANTEE	DCG II, LLC	
ABBREVIATED LEGAL DESCRIPTION	Lot 2, SP #1079107, Recording #7912270667, Tract B, Evergreen Plaza, Vol 100, Pgs 74-75, Tract C, Evergreen Plaza, Vol 100, Pgs 74-75 (See Pages 6-7 for full legal description)	
ASSESSOR'S TAX PARCEL NO	242320-0050-00, 242320-0060-08, 242320-0070-06	

THIS DECLARATION OF EASEMENTS AND COVENANTS (the "Declaration"), is made and entered into this \_\_\_ day of December, 2003, by DCG II, LLC, a Washington limited liability company ("DCG").

**RECITALS:**

A DCG is the owner of property located in the City of Federal Way, County of King, State of Washington, which is more particularly described on Exhibit A attached hereto and incorporated herein by this reference ("DCG Parcel"), and that certain property located in the City of Federal Way, County of King, State of Washington, which is more particularly described on Exhibit B attached hereto and incorporated herein by this reference ("Lot 5"). Both properties are shown on the site plan for Evergreen Plaza attached hereto as Exhibit C and incorporated herein by this reference. Each of the DCG Parcel and Lot 5 are sometimes hereinafter referred to as a "Parcel."

B. DCG is selling Lot 5 to Sound Credit Union ("Sound Credit"), and

C. DCG desires to establish certain reciprocal easements, parking rights and covenants for said property, as hereinafter set forth

NOW, THEREFORE, DCG, for itself and its successors and assigns, does hereby declare, grant, covenant and agree as follows:

1. Ingress, Egress Easement. DCG hereby establishes and creates for the benefit of the DCG Parcel and Lot 5, and the benefit of each of their successors, assigns, licensees, suppliers, customers and employees, a non-exclusive, perpetual easement, appurtenant to each Parcel, for the purpose of passenger vehicle, light truck, and pedestrian ingress, egress and access to and from each Parcel and 320<sup>th</sup> Street and 23<sup>rd</sup> Avenue, over, upon, across and through the drive lane areas of Tract A of the Amendment to Evergreen Plaza Building Site Plan PUD recorded under King County AFN 20030909000708 (formerly known as Tract B on the plat of Evergreen Plaza P U D Vol. 100-74/75), as shown on attached Exhibit C ("Evergreen Plaza"), and over, upon, across and through the drive lanes on each Parcel, as they may exist from time to time, to access other roads or driveways. Each owner of a Parcel shall adequately maintain the easement area on its Parcel, in a level, evenly-paved condition (subject to Federal Way's landscaping requirements) and at a grade level reasonably compatible to the other party's Parcel. In the event the owner of a Parcel fails or refuses to adequately maintain the easement area of such Parcel after receiving reasonable written notice from the owner of any part or all of another Parcel, the party giving the written notice shall have the option, but not the obligation, of performing the necessary maintenance and billing the reasonable cost thereof to the owner of the Parcel required to maintain the easement area. This easement shall include the right to enter upon such other portions of a Parcel as are necessary for the purposes of maintaining said easement area.

2. Parking Covenant. DCG hereby establishes and creates for the benefit of the DCG Parcel and Lot 5, and the benefit of each of their successors, assigns, licensees, suppliers, customers and employees, a non-exclusive, perpetual easement, appurtenant to each Parcel, for driveway, vehicular and pedestrian ingress and egress and parking purposes over the common driveways, walkways and parking areas as they may exist from time to time within each Parcel, provided, however, that each Parcel must independently adhere to all existing city and/or county municipal parking requirements without the use of any parking spaces on another Parcel unless owned by the same party. No buildings, fences, curbs or other obstructions prohibiting reasonable access between the Parcels shall be constructed without the prior written approval of the owner of the other Parcel. The owner of each Parcel, at such party's expense, shall be obligated to adequately maintain such party's Parcel.

3. Utilities Easement. DCG hereby establishes and creates for the benefit of the DCG Parcel and Lot 5, and the benefit of each of their successors and assigns, a non-exclusive, perpetual easement, over, across, under and upon each Parcel, for the purpose of connecting to all utilities on or abutting a Parcel which may exist from time to time, including without limitation water, storm water, electrical, sewer, telephone, and cable. Any party connecting to existing utilities shall be responsible for the costs in connecting to said utilities. In the event this utility easement interferes with improvements an owner desires to make to such owner's Parcel, the owner so affected shall be entitled to relocate

the utilities and this easement, and any improvements placed in the easement area by the owner of the other Parcel, at the affected owner's sole cost and expense, after giving the other owner ninety (90) days written notice. Any relocation shall be designed and constructed in a manner which does not adversely impact the other party's Parcel or its business

4. Signage Rights and Easements DCG hereby assigns, conveys and transfers to Sound Credit its right, if any, (as of the date of the Addendum) along one right of way abutting Evergreen Plaza, for one (1) sign ("Sign Credit"), provided that the size and location of such sign shall be subject to the prior written approval of DCG (which approval shall not be unreasonably withheld, conditioned or delayed), it being acknowledged that any such sign shall not be permitted to unreasonably block the view of any other business in Evergreen Plaza. The assignment and transfer of the Sign Credit shall be separate and distinct from any signage rights available to Lot 5. It is the intention of this paragraph that Sound Credit will be able to install an off-site sign abutting South 320th Street or 23<sup>rd</sup> Avenue South with the Sign Credit if permitted by the City of Federal Way. Sound Credit shall be responsible for the installation, maintenance and repair of any such sign. DCG also grants, conveys for the benefit of Lot 5, its successors and assigns, a non-exclusive, perpetual easement, appurtenant to Lot 5 for the purpose of installing, operating, maintaining, repairing, replacing and renewing an unobstructive advertising sign and relating landscaping as required by the City of Federal Way for any sign permitted to be installed by Sound Credit hereunder. It is contemplated that the signage easement resulting from the Sign Credit shall be located at the southwest corner of Tract A abutting South 320<sup>th</sup> Street or the northern corner of Tract A abutting 23<sup>rd</sup> Avenue South and that any sign right that Lot 5 may have on its own shall be in the aforementioned location that is not utilized for the sign installed in connection with the Sign Credit

5. Covenants Running With the Land. The above-described easements, restrictions and covenants shall be for the use and benefit of the DCG Parcel and Lot 5, and the owners from time to time of all or any part thereof. All provisions of this Declaration, including the covenants, benefits and burdens, shall run with the land and be binding upon and inure to the heirs, executors, administrators, personal and/or legal representatives, successors, assigns and tenants of the owners of the Parcels. This grant shall be given a reasonable construction so that the intention of the parties to confer a commercial usable right of enjoyment on Lot 5 is carried out.

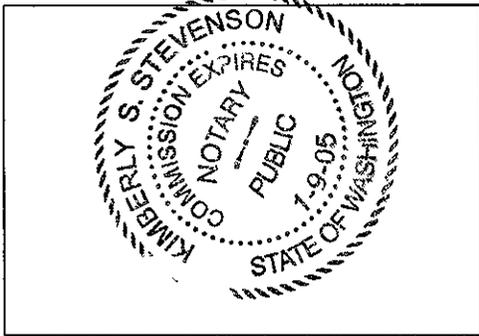
6. No Merger. Ownership by one person or party of both Parcels shall not result in a cancellation or partial cancellation of this Declaration through merger or otherwise. This Declaration shall remain in full force and effect notwithstanding any change in ownership of a Parcel.



COUNTY OF King )

I certify that I know or have satisfactory evidence that Michael Dunne is the person who appeared before me, and said person acknowledged that he/she signed this instrument, on oath stated that he/she was authorized to execute the instrument and acknowledged it as the Managing Partner of DCG II, LLC to be the free and voluntary act for the uses and purposes mentioned in the instrument.

DATED this 29 day of December, 2003



Notary Seal

Kimberly S. Stevenson (Name)  
NOTARY PUBLIC in and for the State of  
Washington residing at: Sept  
My Commission Expires: 1-9-05

**EXHIBIT A****Parcel A:**

LOT 2, as delineated on King County Short Plat Number 1079107, recorded under Recording Number 7912270667, being a portion of Tract A, Evergreen Plaza, a Planned Unit Development, according to the plat thereof, recorded in Volume 100 of Plats, Pages 74 and 75, in King County, Washington.

**Parcel B:**

Tract B, Evergreen Plaza, a Planned Unit Development, according to the plat thereof, recorded in Volume 100 of Plats, Pages 74 and 75, in King County, Washington.

**EXHIBIT B**

Situated in the County of King, State of Washington, and described as follows:

Tract C of Evergreen Plaza, according to plat recorded in Volume 100 of Plats at pages 74 and 75, and as amended by Volume 216 at Pages 36, 37 and 38 in King County, Washington.

AKA Tax Account No 242320-0070-06

**EXHIBIT C**

556  
— A HF  
7310360768  
00185  
OCT--6-78

RECORDED & RETURNED

11 9 130

EVERGREEN PLAZA (TRACT A)

A G R E E M E N T

THIS AGREEMENT, entered into in duplicate between WATER DISTRICT NO. 124, King County, a municipal corporation of the State of Washington hereinafter referred to as the "District", and THE RAINIER FUND hereinafter referred to as the "Developer":

W I T N E S S E T H :

WHEREAS, the District operates and maintains a domestic water supply within its boundaries which can serve property of Developer, and

WHEREAS, Developer desires to construct certain water mains and appurtenances at its own cost to serve Developer's property, for delivery to and operation by the District,

NOW, THEREFORE, IT IS HEREBY AGREED that:

1. The land for which domestic water supply is requested and to which this Agreement applies, is realty in King County, Washington, described as follows:

Tract A, Evergreen Plaza, King County, Washington.

2. The District's engineers shall draw plans and specifications for water main construction to be performed by the Developer under this Agreement.

3. Notice to the District that construction is ready for inspection shall be given not less than 24 hours prior to requested inspection date. Developer shall maintain at the construction area, at all times during construction, a representative to whom District notices may be given regarding construction. Said representative shall be designated in writing by the Developer before the start of work. In the event of change of Developer's designated job representative, then the District shall be immediately notified.

4. Developer shall notify the District the date work and construction described in this Agreement will commence, and said notice shall be given not less than two (2) days (work days and not including Saturday, Sunday or national holidays) before said commencement date. After the work is commenced, it shall vigorously, consistently and in a first-class workmanlike manner, be carried to completion. In the event work and construction described herein is not completed on or before one year from the date of this Agreement, (unless delayed by unavoidable accident, strike or Acts of God), this Agreement shall be void and of no force or effect whatsoever.

5. Developer may prepare and call for bids for construction described herein or negotiate a construction agreement for said construction; however, construction shall be performed and under the supervision of only workers or craftsmen experienced in the installation

FILED FOR RECORD AT  
John R. Bocek  
Attorney at Law  
420 East Main  
Auburn, Washington 98002  
(206) 833-4397 • 854-5920

- 1 -

7810060768

of water mains and the related work.

6. Testing of water facilities shall be performed as required by the District and only after a satisfactory test has been completed and witnessed by the District or its designated agent, will the work be accepted.

7. Developer shall pay a general facility fee of \$.0075 per square foot for the land for which water service is provided, said general facility fee shall be payable at the time application for meters is made. In addition, Developer shall pay District's established meter installation fee and monthly service charge. (The general facility fee shall be a minimum of \$100.00 per month.)

8. Developer will pay the District's expenses arising out of this Agreement as follows:

- a. Reasonable engineering fees incurred by the District;
- b. Reasonable inspection fees;
- c. Reasonable legal fees incurred by the District as related to this improvement;
- d. Publication, license fees and franchise costs for construction performed by the District.

Developer has paid to the District the sum of \$1,935.00 deposit toward the above costs at the time of executing this Agreement.

9. Upon completion of the construction, Developer or contractor shall deliver to the District a bond in the amount of fifty percent (50%) of construction costs that a reliable contractor will make and pay for repairs necessary within one (1) year from the date of acceptance of said construction, arising from faulty labor or material. Form of bond is to be approved by the attorney for the District. Developer shall also deliver Bill of Sale for water mains and appurtenances installed and constructed pursuant to this Agreement. Developer shall pay to the District for mains previously constructed by the District, to wit: 595 feet on 23rd Avenue South, at the rate of \$9.00 per lineal foot for a total sum of \$5,355.00. Said sum shall be paid prior to commencement of construction.

10. Developer hereby agrees to indemnify and hold the District harmless from any and all claims which may be asserted against the District as a result of the construction or maintenance of the work during the one (1) year guarantee period, all as described in this Agreement, prior to final acceptance by the District. Developer shall maintain in full force and effect during the construction period, liability insurance satisfactory to the District.

11. The District and Developer agree that in carrying out the terms of this contract, the Developer shall be acting as an independent contractor and in no respect shall be deemed the agent of the District.

12. The Developer shall not assign this contract without the written consent of the District.

13. Partial waiver or waiver by acquiescence by the District of any provision or condition of this Agreement shall not be a waiver of any other provision or condition of this Agreement.

14. Upon completion of construction, including satisfactory

John H. Bocek  
Attorney at Law  
420 East Main  
Auburn, Washington 98002  
(206) 833-4397 • 854-5920



001-9-78 00248 7810090769 - A RF 7.00

RECORDED NO RECORDS  
OCT 9 1 6 190

7

EVERGREEN PLAZA SHOPPING CENTER  
Agreement No. 233

- A G R E E M E N T -

THIS AGREEMENT, entered into in duplicate between LAKEHAVEN SEWER DISTRICT, King County, a municipal corporation of the State of Washington, hereinafter referred to as the "District", and THE RAINIER FUND, Seattle, Washington, hereinafter referred to as the "Developer":

W I T N E S S E T H :

WHEREAS, the District operates and maintains a system of sewage disposal within its boundaries which can serve property of Developer, and

WHEREAS, the Developer desires to construct certain sewage facilities at its own cost to serve Developer's property, for delivery to and operation by the District.

NOW, THEREFORE, IT IS AGREED that:

1. The land for which sewage treatment is requested and to which this Agreement applies is realty in King County, Washington, described on Exhibit "A" attached hereto and incorporated herein by reference.
2. The Developer shall deliver to the District the plans and specifications for lateral collection system in the Developer's area which is not served by District constructed lines. Said plans shall be in scale and detail requested by the District.
3. No construction shall be commenced before the District has notified Developer in writing that plans and specifications have been approved.
4. The District shall perform all inspection of sewer facilities and no sewer facility shall be covered prior to inspection. Notice to the District that construction is ready for inspection shall be given not less than 24 hours prior to inspection; District shall inspect within 24 hours of said notice. Developer agrees to comply with all District's reasonable inspection requirements. Developer shall maintain at the construction area, at all times during construction, a representative to whom District notices may be given regarding construction. Said representative shall be designated in writing by the Developer.
5. Upon completion of construction, Developer shall assign and convey to the District good title to said sewer facilities together with permanent easements for their location in form acceptable to the District.
6. Developer shall notify the District the date work and construction described in this Agreement will commence. Said notice shall be

Page One

John R. Bocak  
Attorney at Law  
420 East Main  
Auburn, Washington 98002  
(206) 833-4397 • 854-5920

1% EXCISE TAX NOT REQUIRED  
King Co. Records Division  
By *J. Towler*, Deputy

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given not less than two (2) days before said commencement date. In the event of interruption of work for any reason for more than three (3) consecutive days, Developer shall give the District written notice not less than 24 hours before recommencement of work. After the work is commenced, it shall vigorously, consistently and in a first-class workmanlike manner be carried to completion. In the event work and construction described herein is not completed on or before 21 Sept 1979, (unless delayed by an unavoidable accident, strike or Acts of God), this Agreement shall be void and of no force or effect whatsoever.

7. Developer may prepare and call for bids for construction described herein or negotiate a construction agreement for said construction; bids shall not be called nor construction agreement executed prior to approval by the District for the purpose of maintaining District construction and material standards and inspection rights.

8. Developer will procure all necessary state and county licenses or permits for construction.

9. Testing of collection system shall be performed as required by the District, including, but not limited to exfiltration and/or air testing.

10. Developer will pay the District's expenses arising out of this Agreement as follows:

- a. Reasonable engineering fees incurred by the District;
- b. Reasonable inspection fees;
- c. Reasonable legal fees incurred by the District;
- d. Publications, license and franchise costs for construction performed by Developer;
- e. District's administrative and incidental costs.

Developer will pay to the District the sum of \$ 1000.00 deposit toward the above costs at the time of executing this Agreement.

11. Upon completion of construction described in this Agreement and after acceptance by the District of the work performed, for operation and maintenance by the District, the District shall pay the Developer the difference in the direct construction cost between installation of 1,350 feet of 8" trunk and 10" trunk. The Developer shall submit supporting cost information, and costs shall not exceed the reasonable cost to the District for performing similar work. The District shall make the final determination of the cost of oversize.

12. Sanitary sewage service shall be provided by the District to the subject property upon payment of the District's established side sewer fee and monthly service charge.

13. The District shall charge the property described on Exhibit "B" attached hereto and by this reference made a part hereof, a proportional (lineal front foot) share of the cost of the sewer main adjacent to said property. Said charge shall be levied by the District paid forthwith to Developer after receipt by the District. Said charge shall not bear interest from completion of construction to date said side sewer permit is applied for. Reimbursement to Developer as provided in this paragraph shall cease and terminate five (5) years from date of acceptance of said sewer main by the District. In the event service to the property described in this paragraph is secured by connection to any

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other sewer main, said charge would not be paid to Developer.

14. Upon completion of construction, Developer or contractor will deliver to the District a bond in the amount of fifty percent (50%) of construction costs that a reliable contractor will make and pay for repairs necessary within one (1) year from date of acceptance of said construction, arising from faulty labor or material. Form of bond is to be approved by attorney for the District.

15. Developer hereby agrees to indemnify and hold the District harmless from any and all claims which may be assessed against the District as a result of the construction or maintenance of the work described in this Agreement prior to acceptance by the District. Developer shall maintain in full force and effect during the construction period, liability insurance satisfactory to the District.

16. The District and Developer agree that in carrying out the terms of this contract, the Developer shall be acting as an independent contractor and in no respect shall it be deemed an agent of Lakehaven Sewer District.

17. Developer shall not assign this contract without the written consent of the District.

18. Partial waiver or waiver by acquiescence by the District of any provision or condition of this Agreement shall not be a waiver of any other provision or condition of this Agreement.

19. Work and construction performed under this Agreement shall be connected to the District trunk line when this Agreement is fully and completely complied with.

20. Upon completion of construction, Developer shall submit to the District, in writing, a statement of monies expended to perform construction; together with mylar transparencies and such other engineering records and data as may be required by the District.

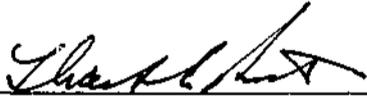
21. This Agreement shall constitute an easement and servitude upon the property described in this Agreement and shall be binding upon the heirs, assigns and successors in interest to the Developer. This Agreement shall constitute an equitable lien against property described in this Agreement and in the event of non-performance by Developer as stated herein, the District may foreclose said lien in the manner authorized by law.

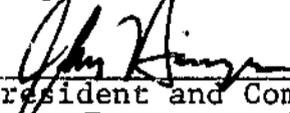
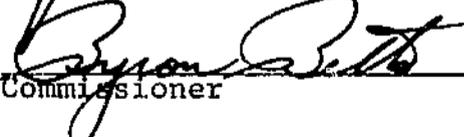
22. This writing constitutes the full and only Agreement between the parties, there being no promises, agreement or understandings, written or oral, except as herein set forth, or as hereafter may be amended in writing.

WITNESS our hands and seals this 21<sup>st</sup> day of September, 1978.

THE RAINIER FUND

LAKEHAVEN SEWER DISTRICT  
King County, Washington

  
\_\_\_\_\_  
\_\_\_\_\_

  
\_\_\_\_\_  
President and Commissioner  
  
\_\_\_\_\_  
Commissioner

Secretary and Commissioner

STATE OF WASHINGTON )  
COUNTY OF KING ) ss.

7810090769

On this 21<sup>st</sup> day of September, 1978, before me, the undersigned, a Notary Public in and for the State of Washington, duly commissioned and sworn, personally appeared Charles Hart and \_\_\_\_\_, to me known to be the President and Secretary, respectively, of THE RAINIER FUND, the corporation that executed the foregoing instrument, and acknowledged the said instrument to be the free and voluntary act and deed of said corporation, for the uses and purposes therein mentioned, and on oath state that they are authorized to execute the said instrument and that the seal affixed, if any, is the corporate seal of said corporation.

WITNESS my hand and official seal hereto affixed the day and year first above written.

Lawrence D. Meyer  
NOTARY PUBLIC in and for the State of  
Washington, residing at Levellay



EXHIBIT "A"

Tracts "A" and "B", Evergreen Plaza planned unit development, as recorded in Volume 100 of plats, pages 74 and 75 records of King County, Washington.

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EXHIBIT "B"

The North 250 feet of the South 500 feet of the East 200 feet of the West 489 feet of the Southeast quarter of the Southwest quarter of Section 9, Township 21 North, Range 4 East, W.M. King County, Washington.

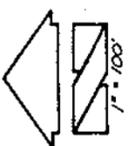
COPY

7810090769

FILED for Record of Deed

LAKEHAVEN SEWER DISTRICT  
P.O. BOX 4249  
FEDERAL WAY, WASH. 98003

44.5 3.114%  
 47.1 1.144%  
 48.1 1.111%  
 49.1 1.077%  
 50.1 1.044%



- FOUND MONUMENT AS DEDICATED
- SET 1/2" IRON W/ CAP
- STAMPED 1/2" x 1/2" x 1/2"
- SET IN LEAD W/ BRASS
- FOUND MONUMENT 1/2" x 1/2" x 1/2"

FOR S.W. 1/4 SECTION 9, TWP 21 N., RGE. 4 E., WM.

-8503259001 4/36-

KCSP No 48009 R  
 APN 8503259001

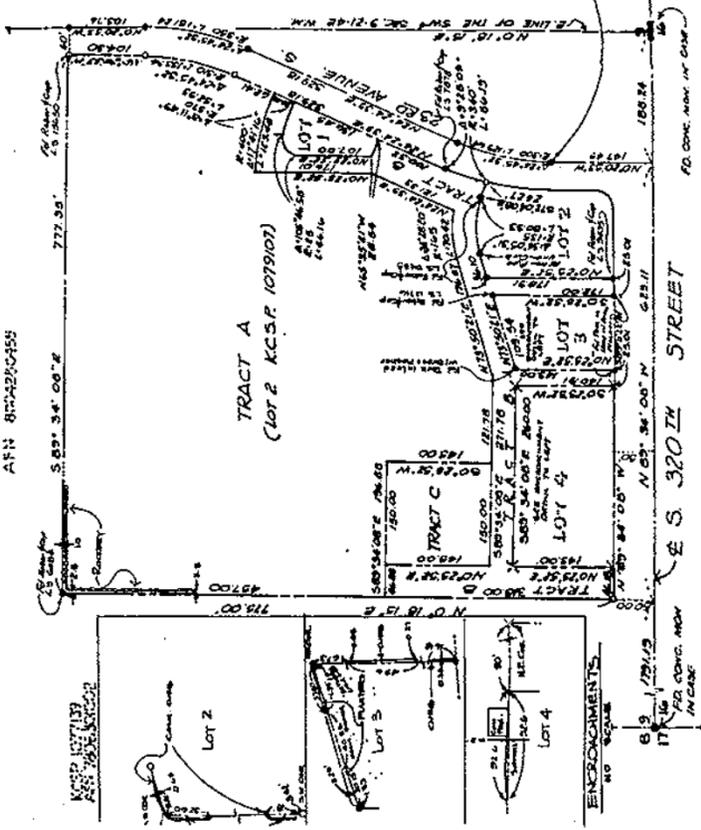
**NOTES:**

1. FIELD SURVEY PERFORMED OCTOBER 27, 1964 - NOVEMBER 6, 1964.
2. REFERENCES: PLAT OF EVERGREEN PLAZA Vol. 100, pp 74-75, RECORDS OF KING COUNTY, WASHINGTON.
3. REFERENCES: KING COUNTY SHORT PLAT No 1079107 RECORDING No 7212210667, RECORDS OF KING COUNTY, WASHINGTON.
4. REFERENCES: RECORD OF SURVEY, Vol. 28, pp 21-D, RECORDS OF KING COUNTY, WASHINGTON.
5. MERIDIAN: IDENTICAL WITH THE PLAT OF EVERGREEN PLAZA.
6. REFERENCE: ALTA COMMITMENT FROM STEWART TITLE COOP WASHINGTON INC, DEED NO 07166, EFFECTIVE 07-07-1964 AT 8:00 AM.

**LEGAL DESCRIPTION:**

LOT 1 AND TRACTS A, B, AND C, EVERGREEN PLAZA ACCORDING TO THE PLAT RECORDED IN VOLUME 100 OF PLATS, PAGES 74-75, IN KING COUNTY, WASHINGTON. SUBJECT TO AND TOYRICK WITH EASEMENTS, RESTRICTIONS AND RESERVATIONS OF RECORD, IF ANY.

FOUR (4) STAKEHOLES AND MONUMENT CASES ONLY. NO ACTUAL MONUMENTS FOUND THIS APPLIED TO E. 25th AVE. EA ALIGNMENT (TYPICAL).



**RECORDERS CERTIFICATE**  
 Filed for record this \_\_\_\_\_ day of \_\_\_\_\_, 1964, at \_\_\_\_\_ M. in book \_\_\_\_\_ of Surveys or page \_\_\_\_\_ of the report of Paul S. Anderson  
 Recorder \_\_\_\_\_  
 S.P. Records

**SURVEYOR'S CERTIFICATE**  
 This map correctly represents a survey made by me or under my direction in compliance with the requirements of the Survey Recording Act in the State of Washington, 1915 Building Code, Chapter 19.05  
 Surveyor \_\_\_\_\_  
 Certificate No 15639

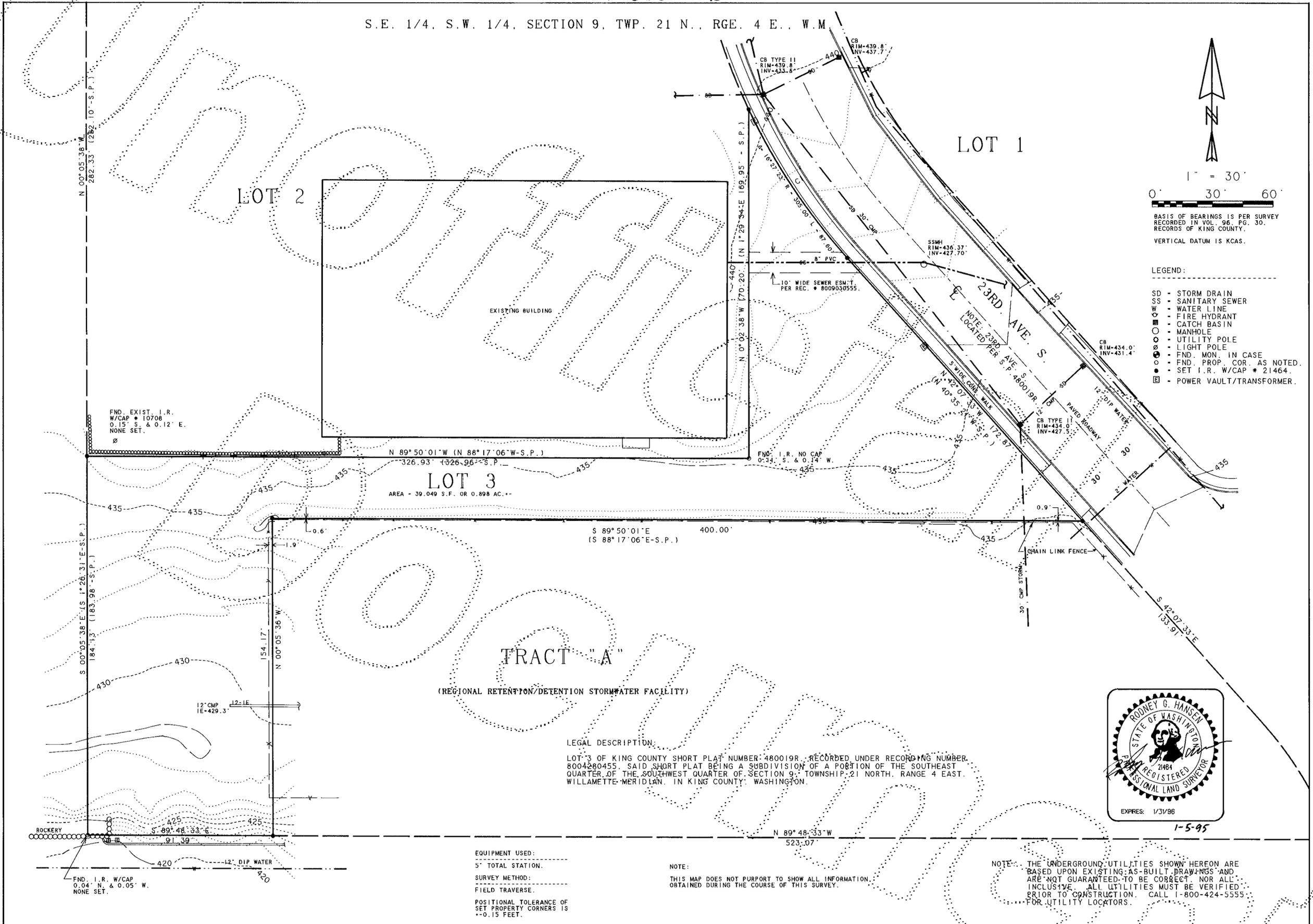


Prepared by  
**Sturpan & Assoc., Inc**  
 200 S. 35th St., Suite A  
 Federal Way, WA, 98003 327-8550  
 LICENSED BY P.S.A.  
 DATE 2/1/65 JOB No 41294-02  
 SCALE 1"=100' P.B. No

<b>RECORD OF SURVEY</b>	SHT
Prepared for:	/
Northwest Building Corporation	OF
1400 Norton Blvd, Seattle WA, 98104	/
<b>KING CO., WASHINGTON</b>	

001328

S.E. 1/4, S.W. 1/4, SECTION 9, TWP. 21 N., RGE. 4 E., W.M.



1" = 30'

0' 30' 60'

BASIS OF BEARINGS IS PER SURVEY RECORDED IN VOL. 96, PG. 30, RECORDS OF KING COUNTY.

VERTICAL DATUM IS KCAS.

- LEGEND:
- SD - STORM DRAIN
  - SS - SANITARY SEWER
  - W - WATER LINE
  - - FIRE HYDRANT
  - - CATCH BASIN
  - - MANHOLE
  - - UTILITY POLE
  - - LIGHT POLE
  - - FND. MON. IN CASE
  - - FND. PROP. COR. AS NOTED.
  - - SET I.R. W/CAP # 21464.
  - - POWER VAULT/TRANSFORMER.

LOT 3

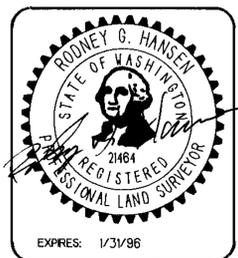
AREA - 39.049 S.F. OR 0.898 AC. +-

TRACT "A"

(REGIONAL RETENTION/DETENTION STORMWATER FACILITY)

LEGAL DESCRIPTION:

LOT 3 OF KING COUNTY SHORT PLAT NUMBER 480019R, RECORDED UNDER RECORDING NUMBER 8004280455, SAID SHORT PLAT BEING A SUBDIVISION OF A PORTION OF THE SOUTHEAST QUARTER OF THE SOUTHWEST QUARTER OF SECTION 9, TOWNSHIP 21 NORTH, RANGE 4 EAST, WILLAMETTE-MERIDIAN, IN KING COUNTY, WASHINGTON.



EQUIPMENT USED:

5" TOTAL STATION.

SURVEY METHOD:

FIELD TRAVERSE.

POSITIONAL TOLERANCE OF SET PROPERTY CORNERS IS +/- 0.15 FEET.

NOTE:

THIS MAP DOES NOT PURPORT TO SHOW ALL INFORMATION OBTAINED DURING THE COURSE OF THIS SURVEY.

NOTE: THE UNDERGROUND UTILITIES SHOWN HEREON ARE BASED UPON EXISTING AS-BUILT DRAWINGS AND ARE NOT GUARANTEED TO BE CORRECT, NOR ALL INCLUSIVE. ALL UTILITIES MUST BE VERIFIED PRIOR TO CONSTRUCTION. CALL 1-800-424-5555 FOR UTILITY LOCATORS.

SURVEYOR'S CERTIFICATE

This map correctly represents a survey made by me or under my direction in conformance with the requirements of the Survey Recording Act at the request of AXEL LINDSTROM in FEB. 1984.

Rodney G. Hansen  
Certificate No. 21464.

RECORDER'S CERTIFICATE 9503089002

Filed for record this 8th day of MAR. 1985 at 8:25 A.M.  
In Book 102 of S.W.U. at page 178 at the request of Rodney G. Hansen.

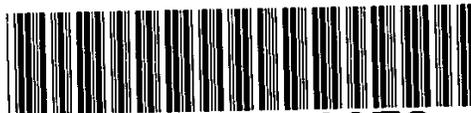
Manager Supt. of Records

BOUNDRY & TOPOGRAPHICAL SURVEY		
FOR STEPUP HOMES		
DWN BY	RGH	DATE 7/08/94
CHKD BY	RGH	SCALE 1" = 30'
JOB NO. 94005		SHEET 1 OF 1

HANSEN SURVEYING  
RENTON, WASHINGTON  
TEL. 235-8440

**RETURN ADDRESS:**

East West Bank  
Loan Service Department  
9300 Flair Drive, 6th Floor  
El Monte, CA 91731



**20140825001072**

FIDELITY (MAJO DT 85.00  
PAGE-001 OF 013  
08/25/2014 15:34  
KING COUNTY, WA

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**DEED OF TRUST**

**DATE: August 18, 2014**

Reference # (if applicable): 582921

Additional on page \_\_\_\_

Grantor(s):

- 1. Winson at Federal Way LLC

Grantee(s)

- 1. East West Bank
- 2. First American Title Insurance Company, Trustee

Legal Description: LOTS 1 AND 6 AND TRACT A OF AMENDED EVERGREEN PLAZA BSP  
REC# 20030909000708

Additional on page \_\_\_\_

Assessor's Tax Parcel ID#: 242320 0050, 242320 0060, and 242320 0010

**THIS DEED OF TRUST is dated August 18, 2014, among Winson at Federal Way LLC, a Washington limited liability company ("Grantor"); East West Bank, whose mailing address is Loan Servicing Department, 9300 Flair Drive, 6th Floor, El Monte, CA 91731 (referred to below sometimes as "Lender" and sometimes as "Beneficiary"); and First American Title Insurance Company, whose mailing address is 818 Stewart Street, Suite 800, Seattle, WA 98101 (referred to below as "Trustee").**

Recorded at the request of  
**FIDELITY NATIONAL TITLE**  
MAJOR ACCOUNTS

Order # 20369453 (3) 85

Loan No: 582921

**DEED OF TRUST  
(Continued)**

Page 2

**CONVEYANCE AND GRANT.** For valuable consideration, Grantor conveys to Trustee in trust with power of sale, right of entry and possession and for the benefit of Lender as Beneficiary, all of Grantor's right, title, and interest in and to the following described real property, together with all existing or subsequently erected or affixed buildings, improvements and fixtures; all easements, rights of way, and appurtenances; all water, water rights and ditch rights (including stock in utilities with ditch or irrigation rights); and all other rights, royalties, and profits relating to the real property, including without limitation all minerals, oil, gas, geothermal and similar matters, **(the "Real Property")** located in King County, State of Washington:

**LOTS 1 AND 6 AND TRACT A OF AMENDMENT TO EVERGREEN PLAZA BINDING SITE PLAN / PUD, RECORDED SEPTEMBER 9, 2003 UNDER RECORDING NO. 20030909000708 IN VOLUME 216, PAGES 36 TO 38, IN KING COUNTY, WASHINGTON;**

**EXCEPTING THEREFROM THAT PORTION CONVEYED TO THE CITY OF FEDERAL WAY BY DEED RECORDED UNDER KING COUNTY RECORDING NO. 20050524000385.**

**SITUATE IN THE CITY OF FEDERAL WAY, COUNTY OF KING, STATE OF WASHINGTON.**

The DEFINITION of "Related Documents" is hereby amended to read as follows:

**Related Documents.** The words "Related Documents" mean all promissory notes, credit agreements, loan agreements, security agreements, mortgages, deeds of trust, security deeds, collateral mortgages, Interest Rate Derivative Documentation, and all other instruments, agreements and documents, whether now or hereafter existing, executed in connection with the Indebtedness; except that the words do not mean any guaranty or environmental agreement, whether now or hereafter existing, executed in connection with the Indebtedness.

The following DEFINITION is hereby added to the Agreement:

**Interest Rate Derivative Documentation.** The words "Interest Rate Derivative Documentation" mean each trade confirmation, and the international swaps and derivative association master and schedule agreement executed in connection with the Indebtedness

**The Real Property or its address is commonly known as 2120 - 2210 S. 320th Street, Federal Way, WA 98003. The Real Property tax identification number is 242320 0050, 242320 0060, and 242320 0010.**

Grantor hereby assigns as security to Lender, all of Grantor's right, title, and interest in and to all leases, Rents, and profits of the Property. This assignment is recorded in accordance with RCW 65.08.070; the lien created by this assignment is intended to be specific, perfected and choate upon the recording of this Deed of Trust. Lender grants to Grantor a license to collect the Rents and profits, which license may be revoked at Lender's option and shall be automatically revoked upon acceleration of all or part of the Indebtedness. In addition, Grantor grants to Lender a Uniform Commercial Code security interest in the Personal Property and Rents.

**THIS DEED OF TRUST, INCLUDING THE ASSIGNMENT OF RENTS AND THE SECURITY INTEREST IN THE RENTS AND PERSONAL PROPERTY, IS GIVEN TO SECURE (A) PAYMENT OF THE INDEBTEDNESS AND (B) PERFORMANCE OF ANY AND ALL OBLIGATIONS UNDER THE NOTE, THE RELATED DOCUMENTS, AND THIS DEED OF TRUST. THIS DEED OF TRUST IS GIVEN AND ACCEPTED ON THE FOLLOWING TERMS:**

**PAYMENT AND PERFORMANCE.** Except as otherwise provided in this Deed of Trust, Grantor shall pay to Lender all amounts secured by this Deed of Trust as they become due, and shall strictly and in a timely manner perform all of Grantor's obligations under the Note, this Deed of Trust, and the Related Documents.

**POSSESSION AND MAINTENANCE OF THE PROPERTY.** Grantor agrees that Grantor's possession and use of the Property shall be governed by the following provisions:

**Possession and Use.** Until the occurrence of an Event of Default, Grantor may (1) remain in possession and

**DEED OF TRUST  
(Continued)**

Loan No: 582921

Page 3

control of the Property; (2) use, operate or manage the Property; and (3) collect the Rents from the Property (this privilege is a license from Lender to Grantor automatically revoked upon default). The following provisions relate to the use of the Property or to other limitations on the Property. The Real Property is not used principally for agricultural purposes.

**Duty to Maintain.** Grantor shall maintain the Property in tenantable condition and promptly perform all repairs, replacements, and maintenance necessary to preserve its value.

**Compliance With Environmental Laws.** Grantor represents and warrants to Lender that: (1) During the period of Grantor's ownership of the Property, there has been no use, generation, manufacture, storage, treatment, disposal, release or threatened release of any Hazardous Substance by any person on, under, about or from the Property; (2) Grantor has no knowledge of, or reason to believe that there has been, except as previously disclosed to and acknowledged by Lender in writing, (a) any breach or violation of any Environmental Laws, (b) any use, generation, manufacture, storage, treatment, disposal, release or threatened release of any Hazardous Substance on, under, about or from the Property by any prior owners or occupants of the Property, or (c) any actual or threatened litigation or claims of any kind by any person relating to such matters; and (3) Except as previously disclosed to and acknowledged by Lender in writing, (a) neither Grantor nor any tenant, contractor, agent or other authorized user of the Property shall use, generate, manufacture, store, treat, dispose of or release any Hazardous Substance on, under, about or from the Property; and (b) any such activity shall be conducted in compliance with all applicable federal, state, and local laws, regulations and ordinances, including without limitation all Environmental Laws. Grantor authorizes Lender and its agents to enter upon the Property to make such inspections and tests, at Grantor's expense, as Lender may deem appropriate to determine compliance of the Property with this section of the Deed of Trust. Any inspections or tests made by Lender shall be for Lender's purposes only and shall not be construed to create any responsibility or liability on the part of Lender to Grantor or to any other person. The representations and warranties contained herein are based on Grantor's due diligence in investigating the Property for Hazardous Substances. Grantor hereby (1) releases and waives any future claims against Lender for indemnity or contribution in the event Grantor becomes liable for cleanup or other costs under any such laws; and (2) agrees to indemnify, defend, and hold harmless Lender against any and all claims, losses, liabilities, damages, penalties, and expenses which Lender may directly or indirectly sustain or suffer resulting from a breach of this section of the Deed of Trust or as a consequence of any use, generation, manufacture, storage, disposal, release or threatened release occurring prior to Grantor's ownership or interest in the Property, whether or not the same was or should have been known to Grantor. The provisions of this section of the Deed of Trust, including the obligation to indemnify and defend, shall survive the payment of the Indebtedness and the satisfaction and reconveyance of the lien of this Deed of Trust and shall not be affected by Lender's acquisition of any interest in the Property, whether by foreclosure or otherwise.

**Nuisance, Waste.** Grantor shall not cause, conduct or permit any nuisance nor commit, permit, or suffer any stripping of or waste on or to the Property or any portion of the Property. Without limiting the generality of the foregoing, Grantor will not remove, or grant to any other party the right to remove, any timber, minerals (including oil and gas), coal, clay, scoria, soil, gravel or rock products without Lender's prior written consent.

**Removal of Improvements.** Grantor shall not demolish or remove any Improvements from the Real Property without Lender's prior written consent. As a condition to the removal of any Improvements, Lender may require Grantor to make arrangements satisfactory to Lender to replace such Improvements with Improvements of at least equal value.

**Lender's Right to Enter.** Lender and Lender's agents and representatives may enter upon the Real Property at all reasonable times to attend to Lender's interests and to inspect the Real Property for purposes of Grantor's compliance with the terms and conditions of this Deed of Trust.

**Compliance with Governmental Requirements.** Grantor shall promptly comply, and shall promptly cause compliance by all agents, tenants or other persons or entities of every nature whatsoever who rent, lease or otherwise use or occupy the Property in any manner, with all laws, ordinances, and regulations, now or hereafter in effect, of all governmental authorities applicable to the use or occupancy of the Property, including without limitation, the Americans With Disabilities Act. Grantor may contest in good faith any such law, ordinance, or regulation and withhold compliance during any proceeding, including appropriate appeals, so long as Grantor has notified Lender in writing prior to doing so and so long as, in Lender's sole opinion, Lender's interests in the Property are not jeopardized. Lender may require Grantor to post adequate security or a surety bond, reasonably satisfactory to Lender, to protect Lender's interest.

**Duty to Protect.** Grantor agrees neither to abandon or leave unattended the Property. Grantor shall do all other acts, in addition to those acts set forth above in this section, which from the character and use of the Property are reasonably necessary to protect and preserve the Property.

**DUE ON SALE - CONSENT BY LENDER.** Lender may, at Lender's option, (A) declare immediately due and payable all sums secured by this Deed of Trust or (B) increase the interest rate provided for in the Note or other document evidencing the Indebtedness and impose such other conditions as Lender deems appropriate, upon the sale or transfer,

**DEED OF TRUST  
(Continued)**

Loan No: 582921

Page 4

without Lender's prior written consent, of all or any part of the Real Property, or any interest in the Real Property. A "sale or transfer" means the conveyance of Real Property or any right, title or interest in the Real Property; whether legal, beneficial or equitable; whether voluntary or involuntary; whether by outright sale, deed, installment sale contract, land contract, contract for deed, leasehold interest with a term greater than three (3) years, lease-option contract, or by sale, assignment, or transfer of any beneficial interest in or to any land trust holding title to the Real Property, or by any other method of conveyance of an interest in the Real Property. If any Grantor is a corporation, partnership or limited liability company, transfer also includes any change in ownership of more than twenty-five percent (25%) of the voting stock, partnership interests or limited liability company interests, as the case may be, of such Grantor. However, this option shall not be exercised by Lender if such exercise is prohibited by federal law or by Washington law.

**TAXES AND LIENS.** The following provisions relating to the taxes and liens on the Property are part of this Deed of Trust:

**Payment.** Grantor shall pay when due (and in all events prior to delinquency) all taxes, special taxes, assessments, charges (including water and sewer), fines and impositions levied against or on account of the Property, and shall pay when due all claims for work done on or for services rendered or material furnished to the Property. Grantor shall maintain the Property free of all liens having priority over or equal to the interest of Lender under this Deed of Trust, except for the lien of taxes and assessments not due and except as otherwise provided in this Deed of Trust.

**Right to Contest.** Grantor may withhold payment of any tax, assessment, or claim in connection with a good faith dispute over the obligation to pay, so long as Lender's interest in the Property is not jeopardized. If a lien arises or is filed as a result of nonpayment, Grantor shall within fifteen (15) days after the lien arises or, if a lien is filed, within fifteen (15) days after Grantor has notice of the filing, secure the discharge of the lien, or if requested by Lender, deposit with Lender cash or a sufficient corporate surety bond or other security satisfactory to Lender in an amount sufficient to discharge the lien plus any costs and attorneys' fees, or other charges that could accrue as a result of a foreclosure or sale under the lien. In any contest, Grantor shall defend itself and Lender and shall satisfy any adverse judgment before enforcement against the Property. Grantor shall name Lender as an additional obligee under any surety bond furnished in the contest proceedings.

**Evidence of Payment.** Grantor shall upon demand furnish to Lender satisfactory evidence of payment of the taxes or assessments and shall authorize the appropriate governmental official to deliver to Lender at any time a written statement of the taxes and assessments against the Property.

**Notice of Construction.** Grantor shall notify Lender at least fifteen (15) days before any work is commenced, any services are furnished, or any materials are supplied to the Property, if any mechanic's lien, materialmen's lien, or other lien could be asserted on account of the work, services, or materials and the cost exceeds \$20,000.00. Grantor will upon request of Lender furnish to Lender advance assurances satisfactory to Lender that Grantor can and will pay the cost of such improvements.

**PROPERTY DAMAGE INSURANCE.** The following provisions relating to insuring the Property are a part of this Deed of Trust.

**Maintenance of Insurance.** Grantor shall procure and maintain policies of fire insurance with standard extended coverage endorsements on a replacement basis for the full insurable value covering all Improvements on the Real Property in an amount sufficient to avoid application of any coinsurance clause, and with a standard mortgagee clause in favor of Lender. Grantor shall also procure and maintain comprehensive general liability insurance in such coverage amounts as Lender may request with Trustee and Lender being named as additional insureds in such liability insurance policies. Additionally, Grantor shall maintain such other insurance, including but not limited to hazard, business interruption, and boiler insurance, as Lender may reasonably require. Policies shall be written in form, amounts, coverages and basis reasonably acceptable to Lender and issued by a company or companies reasonably acceptable to Lender. Grantor, upon request of Lender, will deliver to Lender from time to time the policies or certificates of insurance in form satisfactory to Lender, including stipulations that coverages will not be cancelled or diminished without at least thirty (30) days prior written notice to Lender. Each insurance policy also shall include an endorsement providing that coverage in favor of Lender will not be impaired in any way by any act, omission or default of Grantor or any other person. Should the Real Property be located in an area designated by the Director of the Federal Emergency Management Agency as a special flood hazard area, Grantor agrees to obtain and maintain Federal Flood Insurance, if available, for the full unpaid principal balance of the loan and any prior liens on the property securing the loan, up to the maximum policy limits set under the National Flood Insurance Program, or as otherwise required by Lender, and to maintain such insurance for the term of the loan.

**Application of Proceeds.** Grantor shall promptly notify Lender of any loss or damage to the Property if the estimated cost of repair or replacement exceeds \$25,000.00. Lender may make proof of loss if Grantor fails to do so within fifteen (15) days of the casualty. Whether or not Lender's security is impaired, Lender may, at Lender's election, receive and retain the proceeds of any insurance and apply the proceeds to the reduction of the Indebtedness, payment of any lien affecting the Property, or the restoration and repair of the Property. If Lender elects to apply the proceeds to restoration and repair, Grantor shall repair or replace the damaged or destroyed

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Improvements in a manner satisfactory to Lender. Lender shall, upon satisfactory proof of such expenditure, pay or reimburse Grantor from the proceeds for the reasonable cost of repair or restoration if Grantor is not in default under this Deed of Trust. Any proceeds which have not been disbursed within 180 days after their receipt and which Lender has not committed to the repair or restoration of the Property shall be used first to pay any amount owing to Lender under this Deed of Trust, then to pay accrued interest, and the remainder, if any, shall be applied to the principal balance of the Indebtedness. If Lender holds any proceeds after payment in full of the Indebtedness, such proceeds shall be paid without interest to Grantor as Grantor's interests may appear.

**Grantor's Report on Insurance.** Upon request of Lender, however not more than once a year, Grantor shall furnish to Lender a report on each existing policy of insurance showing: (1) the name of the insurer; (2) the risks insured; (3) the amount of the policy; (4) the property insured, the then current replacement value of such property, and the manner of determining that value; and (5) the expiration date of the policy. Grantor shall, upon request of Lender, have an independent appraiser satisfactory to Lender determine the cash value replacement cost of the Property.

**LENDER'S EXPENDITURES.** If any action or proceeding is commenced that would materially affect Lender's interest in the Property or if Grantor fails to comply with any provision of this Deed of Trust or any Related Documents, including but not limited to Grantor's failure to discharge or pay when due any amounts Grantor is required to discharge or pay under this Deed of Trust or any Related Documents, Lender on Grantor's behalf may (but shall not be obligated to) take any action that Lender deems appropriate, including but not limited to discharging or paying all taxes, liens, security interests, encumbrances and other claims, at any time levied or placed on the Property and paying all costs for insuring, maintaining and preserving the Property. All such expenditures incurred or paid by Lender for such purposes will then bear interest at the rate charged under the Note from the date incurred or paid by Lender to the date of repayment by Grantor. All such expenses will become a part of the Indebtedness and, at Lender's option, will (A) be payable on demand; (B) be added to the balance of the Note and be apportioned among and be payable with any installment payments to become due during either (1) the term of any applicable insurance policy; or (2) the remaining term of the Note; or (C) be treated as a balloon payment which will be due and payable at the Note's maturity. The Deed of Trust also will secure payment of these amounts. Such right shall be in addition to all other rights and remedies to which Lender may be entitled upon Default.

**WARRANTY; DEFENSE OF TITLE.** The following provisions relating to ownership of the Property are a part of this Deed of Trust:

**Title.** Grantor warrants that: (a) Grantor holds good and marketable title of record to the Property in fee simple, free and clear of all liens and encumbrances other than those set forth in the Real Property description or in any title insurance policy, title report, or final title opinion issued in favor of, and accepted by, Lender in connection with this Deed of Trust, and (b) Grantor has the full right, power, and authority to execute and deliver this Deed of Trust to Lender.

**Defense of Title.** Subject to the exception in the paragraph above, Grantor warrants and will forever defend the title to the Property against the lawful claims of all persons. In the event any action or proceeding is commenced that questions Grantor's title or the interest of Trustee or Lender under this Deed of Trust, Grantor shall defend the action at Grantor's expense. Grantor may be the nominal party in such proceeding, but Lender shall be entitled to participate in the proceeding and to be represented in the proceeding by counsel of Lender's own choice, and Grantor will deliver, or cause to be delivered, to Lender such instruments as Lender may request from time to time to permit such participation.

**Compliance With Laws.** Grantor warrants that the Property and Grantor's use of the Property complies with all existing applicable laws, ordinances, and regulations of governmental authorities.

**Survival of Representations and Warranties.** All representations, warranties, and agreements made by Grantor in this Deed of Trust shall survive the execution and delivery of this Deed of Trust, shall be continuing in nature, and shall remain in full force and effect until such time as Grantor's Indebtedness shall be paid in full.

**CONDEMNATION.** The following provisions relating to condemnation proceedings are a part of this Deed of Trust:

**Proceedings.** If any proceeding in condemnation is filed, Grantor shall promptly notify Lender in writing, and Grantor shall promptly take such steps as may be necessary to defend the action and obtain the award. Grantor may be the nominal party in such proceeding, but Lender shall be entitled to participate in the proceeding and to be represented in the proceeding by counsel of its own choice all at Grantor's expense, and Grantor will deliver or cause to be delivered to Lender such instruments and documentation as may be requested by Lender from time to time to permit such participation.

**Application of Net Proceeds.** If all or any part of the Property is condemned by eminent domain proceedings or by any proceeding or purchase in lieu of condemnation, Lender may at its election require that all or any portion of the net proceeds of the award be applied to the Indebtedness or the repair or restoration of the Property. The net proceeds of the award shall mean the award after payment of all reasonable costs, expenses, and attorneys' fees incurred by Trustee or Lender in connection with the condemnation.

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**IMPOSITION OF TAXES, FEES AND CHARGES BY GOVERNMENTAL AUTHORITIES.** The following provisions relating to governmental taxes, fees and charges are a part of this Deed of Trust:

**Current Taxes, Fees and Charges.** Upon request by Lender, Grantor shall execute such documents in addition to this Deed of Trust and take whatever other action is requested by Lender to perfect and continue Lender's lien on the Real Property. Grantor shall reimburse Lender for all taxes, as described below, together with all expenses incurred in recording, perfecting or continuing this Deed of Trust, including without limitation all taxes, fees, documentary stamps, and other charges for recording or registering this Deed of Trust.

**Taxes.** The following shall constitute taxes to which this section applies: (1) a specific tax upon this type of Deed of Trust or upon all or any part of the Indebtedness secured by this Deed of Trust; (2) a specific tax on Grantor which Grantor is authorized or required to deduct from payments on the Indebtedness secured by this type of Deed of Trust; (3) a tax on this type of Deed of Trust chargeable against the Lender or the holder of the Note; and (4) a specific tax on all or any portion of the Indebtedness or on payments of principal and interest made by Grantor.

**Subsequent Taxes.** If any tax to which this section applies is enacted subsequent to the date of this Deed of Trust, this event shall have the same effect as an Event of Default, and Lender may exercise any or all of its available remedies for an Event of Default as provided below unless Grantor either (1) pays the tax before it becomes delinquent, or (2) contests the tax as provided above in the Taxes and Liens section and deposits with Lender cash or a sufficient corporate surety bond or other security satisfactory to Lender.

**SECURITY AGREEMENT; FINANCING STATEMENTS.** The following provisions relating to this Deed of Trust as a security agreement are a part of this Deed of Trust:

**Security Agreement.** This instrument shall constitute a Security Agreement to the extent any of the Property constitutes fixtures, and Lender shall have all of the rights of a secured party under the Uniform Commercial Code as amended from time to time.

**Security Interest.** Upon request by Lender, Grantor shall take whatever action is requested by Lender to perfect and continue Lender's security interest in the Rents and Personal Property. In addition to recording this Deed of Trust in the real property records, Lender may, at any time and without further authorization from Grantor, file executed counterparts, copies or reproductions of this Deed of Trust as a financing statement. Grantor shall reimburse Lender for all expenses incurred in perfecting or continuing this security interest. Upon default, Grantor shall not remove, sever or detach the Personal Property from the Property. Upon default, Grantor shall assemble any Personal Property not affixed to the Property in a manner and at a place reasonably convenient to Grantor and Lender and make it available to Lender within three (3) days after receipt of written demand from Lender to the extent permitted by applicable law.

**Addresses.** The mailing addresses of Grantor (debtor) and Lender (secured party) from which information concerning the security interest granted by this Deed of Trust may be obtained (each as required by the Uniform Commercial Code) are as stated on the first page of this Deed of Trust.

**FURTHER ASSURANCES; ATTORNEY-IN-FACT.** The following provisions relating to further assurances and attorney-in-fact are a part of this Deed of Trust:

**Further Assurances.** At any time, and from time to time, upon request of Lender, Grantor will make, execute and deliver, or will cause to be made, executed or delivered, to Lender or to Lender's designee, and when requested by Lender, cause to be filed, recorded, refiled, or rerecorded, as the case may be, at such times and in such offices and places as Lender may deem appropriate, any and all such mortgages, deeds of trust, security deeds, security agreements, financing statements, continuation statements, instruments of further assurance, certificates, and other documents as may, in the sole opinion of Lender, be necessary or desirable in order to effectuate, complete, perfect, continue, or preserve (1) Grantor's obligations under the Note, this Deed of Trust, and the Related Documents, and (2) the liens and security interests created by this Deed of Trust as first and prior liens on the Property, whether now owned or hereafter acquired by Grantor. Unless prohibited by law or Lender agrees to the contrary in writing, Grantor shall reimburse Lender for all costs and expenses incurred in connection with the matters referred to in this paragraph.

**Attorney-in-Fact.** If Grantor fails to do any of the things referred to in the preceding paragraph, Lender may do so for and in the name of Grantor and at Grantor's expense. For such purposes, Grantor hereby irrevocably appoints Lender as Grantor's attorney-in-fact for the purpose of making, executing, delivering, filing, recording, and doing all other things as may be necessary or desirable, in Lender's sole opinion, to accomplish the matters referred to in the preceding paragraph.

**FULL PERFORMANCE.** If Grantor pays all the Indebtedness when due, and otherwise performs all the obligations imposed upon Grantor under this Deed of Trust, Lender shall execute and deliver to Trustee a request for full reconveyance and shall execute and deliver to Grantor suitable statements of termination of any financing statement on file evidencing Lender's security interest in the Rents and the Personal Property. Any reconveyance fee shall be paid by

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Grantor, if permitted by applicable law. The grantee in any reconveyance may be described as the "person or persons legally entitled thereto", and the recitals in the reconveyance of any matters or facts shall be conclusive proof of the truthfulness of any such matters or facts.

**EVENTS OF DEFAULT.** Each of the following, at Lender's option, shall constitute an Event of Default under this Deed of Trust:

**Payment Default.** Grantor fails to make any payment when due under the Indebtedness.

**Other Defaults.** Grantor fails to comply with or to perform any other term, obligation, covenant or condition contained in this Deed of Trust or in any of the Related Documents or to comply with or to perform any term, obligation, covenant or condition contained in any other agreement between Lender and Grantor.

**Compliance Default.** Failure to comply with any other term, obligation, covenant or condition contained in this Deed of Trust, the Note or in any of the Related Documents.

**Default on Other Payments.** Failure of Grantor within the time required by this Deed of Trust to make any payment for taxes or insurance, or any other payment necessary to prevent filing of or to effect discharge of any lien.

**Environmental Default.** Failure of any party to comply with or perform when due any term, obligation, covenant or condition contained in any environmental agreement executed in connection with the Property.

**Default in Favor of Third Parties.** Should Grantor default under any loan, extension of credit, security agreement, purchase or sales agreement, or any other agreement, in favor of any other creditor or person that may materially affect any of Grantor's property or Grantor's ability to repay the Indebtedness or Grantor's ability to perform Grantor's obligations under this Deed of Trust or any of the Related Documents.

**False Statements.** Any warranty, representation or statement made or furnished to Lender by Grantor or on Grantor's behalf under this Deed of Trust or the Related Documents is false or misleading in any material respect, either now or at the time made or furnished or becomes false or misleading at any time thereafter.

**Defective Collateralization.** This Deed of Trust or any of the Related Documents ceases to be in full force and effect (including failure of any collateral document to create a valid and perfected security interest or lien) at any time and for any reason.

**Death or Insolvency.** The dissolution of Grantor's (regardless of whether election to continue is made), any member withdraws from the limited liability company, or any other termination of Grantor's existence as a going business or the death of any member, the insolvency of Grantor, the appointment of a receiver for any part of Grantor's property, any assignment for the benefit of creditors, any type of creditor workout, or the commencement of any proceeding under any bankruptcy or insolvency laws by or against Grantor.

**Creditor or Forfeiture Proceedings.** Commencement of foreclosure or forfeiture proceedings, whether by judicial proceeding, self-help, repossession or any other method, by any creditor of Grantor or by any governmental agency against any property securing the Indebtedness. This includes a garnishment of any of Grantor's accounts, including deposit accounts, with Lender. However, this Event of Default shall not apply if there is a good faith dispute by Grantor as to the validity or reasonableness of the claim which is the basis of the creditor or forfeiture proceeding and if Grantor gives Lender written notice of the creditor or forfeiture proceeding and deposits with Lender monies or a surety bond for the creditor or forfeiture proceeding, in an amount determined by Lender, in its sole discretion, as being an adequate reserve or bond for the dispute.

**Breach of Other Agreement.** Any breach by Grantor under the terms of any other agreement between Grantor and Lender that is not remedied within any grace period provided therein, including without limitation any agreement concerning any indebtedness or other obligation of Grantor to Lender, whether existing now or later.

**Events Affecting Guarantor.** Any of the preceding events occurs with respect to any Guarantor of any of the indebtedness or any Guarantor dies or becomes incompetent, or revokes or disputes the validity of, or liability under, any Guaranty of the Indebtedness.

**Adverse Change.** A material adverse change occurs in Grantor's financial condition, or Lender believes the prospect of payment or performance of the Indebtedness is impaired.

**Right to Cure.** If any default, other than a default in payment is curable and if Grantor has not been given a notice of a breach of the same provision of this Deed of Trust within the preceding twelve (12) months, it may be cured if Grantor, after Lender sends written notice to Grantor demanding cure of such default: (1) cures the default within fifteen (15) days; or (2) if the cure requires more than fifteen (15) days, immediately initiates steps which Lender deems in Lender's sole discretion to be sufficient to cure the default and thereafter continues and completes all reasonable and necessary steps sufficient to produce compliance as soon as reasonably practical.

**RIGHTS AND REMEDIES ON DEFAULT.** If an Event of Default occurs under this Deed of Trust, at any time thereafter, Trustee or Lender may exercise any one or more of the following rights and remedies:

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**Election of Remedies.** Election by Lender to pursue any remedy shall not exclude pursuit of any other remedy, and an election to make expenditures or to take action to perform an obligation of Grantor under this Deed of Trust, after Grantor's failure to perform, shall not affect Lender's right to declare a default and exercise its remedies.

**Accelerate Indebtedness.** Lender shall have the right at its option to declare the entire Indebtedness immediately due and payable, including any prepayment penalty which Grantor would be required to pay.

**Foreclosure.** With respect to all or any part of the Real Property, the Trustee shall have the right to exercise its power of sale and to foreclose by notice and sale, and Lender shall have the right to foreclose by judicial foreclosure, in either case in accordance with and to the full extent provided by applicable law.

**UCC Remedies.** With respect to all or any part of the Personal Property, Lender shall have all the rights and remedies of a secured party under the Uniform Commercial Code.

**Collect Rents.** Lender shall have the right, without notice to Grantor to take possession of and manage the Property and collect the Rents, including amounts past due and unpaid, and apply the net proceeds, over and above Lender's costs, against the Indebtedness. In furtherance of this right, Lender may require any tenant or other user of the Property to make payments of rent or use fees directly to Lender. If the Rents are collected by Lender, then Grantor irrevocably designates Lender as Grantor's attorney-in-fact to endorse instruments received in payment thereof in the name of Grantor and to negotiate the same and collect the proceeds. Payments by tenants or other users to Lender in response to Lender's demand shall satisfy the obligations for which the payments are made, whether or not any proper grounds for the demand existed. Lender may exercise its rights under this subparagraph either in person, by agent, or through a receiver.

**Appoint Receiver.** Lender shall have the right to have a receiver appointed to take possession of all or any part of the Property, with the power to protect and preserve the Property, to operate the Property preceding or pending foreclosure or sale, and to collect the Rents from the Property and apply the proceeds, over and above the cost of the receivership, against the Indebtedness. The receiver may serve without bond if permitted by law. Lender's right to the appointment of a receiver shall exist whether or not the apparent value of the Property exceeds the Indebtedness by a substantial amount. Employment by Lender shall not disqualify a person from serving as a receiver.

**Tenancy at Sufferance.** If Grantor remains in possession of the Property after the Property is sold as provided above or Lender otherwise becomes entitled to possession of the Property upon default of Grantor, Grantor shall become a tenant at sufferance of Lender or the purchaser of the Property and shall, at Lender's option, either (1) pay a reasonable rental for the use of the Property, or (2) vacate the Property immediately upon the demand of Lender.

**Other Remedies.** Trustee or Lender shall have any other right or remedy provided in this Deed of Trust or the Note or available at law or in equity.

**Notice of Sale.** Lender shall give Grantor reasonable notice of the time and place of any public sale of the Personal Property or of the time after which any private sale or other intended disposition of the Personal Property is to be made. Reasonable notice shall mean notice given at least ten (10) days before the time of the sale or disposition. Any sale of the Personal Property may be made in conjunction with any sale of the Real Property.

**Sale of the Property.** To the extent permitted by applicable law, Grantor hereby waives any and all rights to have the Property marshalled. In exercising its rights and remedies, the Trustee or Lender shall be free to sell all or any part of the Property together or separately, in one sale or by separate sales. Lender shall be entitled to bid at any public sale on all or any portion of the Property.

**Attorneys' Fees; Expenses.** If Lender institutes any suit or action to enforce any of the terms of this Deed of Trust, Lender shall be entitled to recover such sum as the court may adjudge reasonable as attorneys' fees at trial and upon any appeal. Whether or not any court action is involved, and to the extent not prohibited by law, all reasonable expenses Lender incurs that in Lender's opinion are necessary at any time for the protection of its interest or the enforcement of its rights shall become a part of the Indebtedness payable on demand and shall bear interest at the Note rate from the date of the expenditure until repaid. Expenses covered by this paragraph include, without limitation, however subject to any limits under applicable law, Lender's attorneys' fees and Lender's legal expenses, whether or not there is a lawsuit, including attorneys' fees and expenses for bankruptcy proceedings (including efforts to modify or vacate any automatic stay or injunction), appeals, and any anticipated post-judgment collection services, the cost of searching records, obtaining title reports (including foreclosure reports), surveyors' reports, and appraisal fees, title insurance, and fees for the Trustee, to the extent permitted by applicable law. Grantor also will pay any court costs, in addition to all other sums provided by law.

**Rights of Trustee.** Trustee shall have all of the rights and duties of Lender as set forth in this section.

**POWERS AND OBLIGATIONS OF TRUSTEE.** The following provisions relating to the powers and obligations of Trustee (pursuant to Lender's instructions) are part of this Deed of Trust:

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**Powers of Trustee.** In addition to all powers of Trustee arising as a matter of law, Trustee shall have the power to take the following actions with respect to the Property upon the written request of Lender and Grantor: (a) join in preparing and filing a map or plat of the Real Property, including the dedication of streets or other rights to the public; (b) join in granting any easement or creating any restriction on the Real Property; and (c) join in any subordination or other agreement affecting this Deed of Trust or the interest of Lender under this Deed of Trust.

**Obligations to Notify.** Trustee shall not be obligated to notify any other party of a pending sale under any other trust deed or lien, or of any action or proceeding in which Grantor, Lender, or Trustee shall be a party, unless required by applicable law, or unless the action or proceeding is brought by Trustee.

**Trustee.** Trustee shall meet all qualifications required for Trustee under applicable law. In addition to the rights and remedies set forth above, with respect to all or any part of the Property, the Trustee shall have the right to foreclose by notice and sale, and Lender shall have the right to foreclose by judicial foreclosure, in either case in accordance with and to the full extent provided by applicable law.

**Successor Trustee.** Lender, at Lender's option, may from time to time appoint a successor Trustee to any Trustee appointed under this Deed of Trust by an instrument executed and acknowledged by Lender and recorded in the office of the recorder of King County, State of Washington. The instrument shall contain, in addition to all other matters required by state law, the names of the original Lender, Trustee, and Grantor, the book and page or the Auditor's File Number where this Deed of Trust is recorded, and the name and address of the successor trustee, and the instrument shall be executed and acknowledged by Lender or its successors in interest. The successor trustee, without conveyance of the Property, shall succeed to all the title, power, and duties conferred upon the Trustee in this Deed of Trust and by applicable law. This procedure for substitution of Trustee shall govern to the exclusion of all other provisions for substitution.

**NOTICES.** Subject to applicable law, and except for notice required or allowed by law to be given in another manner, any notice required to be given under this Deed of Trust, including without limitation any notice of default and any notice of sale shall be given in writing, and shall be effective when actually delivered, when actually received by telefacsimile (unless otherwise required by law), when deposited with a nationally recognized overnight courier, or, if mailed, when deposited in the United States mail, as first class, certified or registered mail postage prepaid, directed to the addresses shown near the beginning of this Deed of Trust. All copies of notices of foreclosure from the holder of any lien which has priority over this Deed of Trust shall be sent to Lender's address, as shown near the beginning of this Deed of Trust. Any party may change its address for notices under this Deed of Trust by giving formal written notice to the other parties, specifying that the purpose of the notice is to change the party's address. For notice purposes, Grantor agrees to keep Lender informed at all times of Grantor's current address. Subject to applicable law, and except for notice required or allowed by law to be given in another manner, if there is more than one Grantor, any notice given by Lender to any Grantor is deemed to be notice given to all Grantors.

**CHOICE OF VENUE.** If there is a lawsuit, Borrower agrees upon Lender's request to submit to the Jurisdiction of the court of King County, State of Washington.

**COUNTERPART PROVISION.** This document may be signed in any number of counterparts, which, when delivered in the original to Lender, shall together constitute one original document.

**MISCELLANEOUS PROVISIONS.** The following miscellaneous provisions are a part of this Deed of Trust:

**Amendments.** This Deed of Trust, together with any Related Documents, constitutes the entire understanding and agreement of the parties as to the matters set forth in this Deed of Trust. No alteration of or amendment to this Deed of Trust shall be effective unless given in writing and signed by the party or parties sought to be charged or bound by the alteration or amendment.

**Annual Reports.** If the Property is used for purposes other than Grantor's residence, Grantor shall furnish to Lender, upon request, a certified statement of net operating income received from the Property during Grantor's previous fiscal year in such form and detail as Lender shall require. "Net operating income" shall mean all cash receipts from the Property less all cash expenditures made in connection with the operation of the Property.

**Caption Headings.** Caption headings in this Deed of Trust are for convenience purposes only and are not to be used to interpret or define the provisions of this Deed of Trust.

**Merger.** There shall be no merger of the interest or estate created by this Deed of Trust with any other interest or estate in the Property at any time held by or for the benefit of Lender in any capacity, without the written consent of Lender.

**Governing Law.** This Deed of Trust will be governed by federal law applicable to Lender and, to the extent not preempted by federal law, the laws of the State of Washington without regard to its conflicts of law provisions. This Deed of Trust has been accepted by Lender in the State of Washington.

**No Waiver by Lender.** Lender shall not be deemed to have waived any rights under this Deed of Trust unless such waiver is given in writing and signed by Lender. No delay or omission on the part of Lender in exercising any right

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shall operate as a waiver of such right or any other right. A waiver by Lender of a provision of this Deed of Trust shall not prejudice or constitute a waiver of Lender's right otherwise to demand strict compliance with that provision or any other provision of this Deed of Trust. No prior waiver by Lender, nor any course of dealing between Lender and Grantor, shall constitute a waiver of any of Lender's rights or of any of Grantor's obligations as to any future transactions. Whenever the consent of Lender is required under this Deed of Trust, the granting of such consent by Lender in any instance shall not constitute continuing consent to subsequent instances where such consent is required and in all cases such consent may be granted or withheld in the sole discretion of Lender.

**Severability.** If a court of competent jurisdiction finds any provision of this Deed of Trust to be illegal, invalid, or unenforceable as to any circumstance, that finding shall not make the offending provision illegal, invalid, or unenforceable as to any other circumstance. If feasible, the offending provision shall be considered modified so that it becomes legal, valid and enforceable. If the offending provision cannot be so modified, it shall be considered deleted from this Deed of Trust. Unless otherwise required by law, the illegality, invalidity, or unenforceability of any provision of this Deed of Trust shall not affect the legality, validity or enforceability of any other provision of this Deed of Trust.

**Successors and Assigns.** Subject to any limitations stated in this Deed of Trust on transfer of Grantor's interest, this Deed of Trust shall be binding upon and inure to the benefit of the parties, their successors and assigns. If ownership of the Property becomes vested in a person other than Grantor, Lender, without notice to Grantor, may deal with Grantor's successors with reference to this Deed of Trust and the Indebtedness by way of forbearance or extension without releasing Grantor from the obligations of this Deed of Trust or liability under the Indebtedness.

**Time is of the Essence.** Time is of the essence in the performance of this Deed of Trust.

**Waive Jury.** All parties to this Deed of Trust hereby waive the right to any jury trial in any action, proceeding, or counterclaim brought by any party against any other party.

**Waiver of Homestead Exemption.** Grantor hereby releases and waives all rights and benefits of the homestead exemption laws of the State of Washington as to all Indebtedness secured by this Deed of Trust.

**DEFINITIONS.** The following capitalized words and terms shall have the following meanings when used in this Deed of Trust. Unless specifically stated to the contrary, all references to dollar amounts shall mean amounts in lawful money of the United States of America. Words and terms used in the singular shall include the plural, and the plural shall include the singular, as the context may require. Words and terms not otherwise defined in this Deed of Trust shall have the meanings attributed to such terms in the Uniform Commercial Code:

**Beneficiary.** The word "Beneficiary" means East West Bank, and its successors and assigns.

**Borrower.** The word "Borrower" means Winson at Federal Way LLC and includes all co-signers and co-makers signing the Note and all their successors and assigns.

**Deed of Trust.** The words "Deed of Trust" mean this Deed of Trust among Grantor, Lender, and Trustee, and includes without limitation all assignment and security interest provisions relating to the Personal Property and Rents.

**Default.** The word "Default" means the Default set forth in this Deed of Trust in the section titled "Default".

**Environmental Laws.** The words "Environmental Laws" mean any and all state, federal and local statutes, regulations and ordinances relating to the protection of human health or the environment, including without limitation the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, as amended, 42 U.S.C. Section 9601, et seq. ("CERCLA"), the Superfund Amendments and Reauthorization Act of 1986, Pub. L. No. 99-499 ("SARA"), the Hazardous Materials Transportation Act, 49 U.S.C. Section 1801, et seq., the Resource Conservation and Recovery Act, 42 U.S.C. Section 6901, et seq., or other applicable state or federal laws, rules, or regulations adopted pursuant thereto.

**Event of Default.** The words "Event of Default" mean any of the events of default set forth in this Deed of Trust in the events of default section of this Deed of Trust.

**Grantor.** The word "Grantor" means Winson at Federal Way LLC.

**Guarantor.** The word "Guarantor" means any guarantor, surety, or accommodation party of any or all of the Indebtedness.

**Guaranty.** The word "Guaranty" means the guaranty from Guarantor to Lender, including without limitation a guaranty of all or part of the Note.

**Hazardous Substances.** The words "Hazardous Substances" mean materials that, because of their quantity, concentration or physical, chemical or infectious characteristics, may cause or pose a present or potential hazard to human health or the environment when improperly used, treated, stored, disposed of, generated, manufactured, transported or otherwise handled. The words "Hazardous Substances" are used in their very broadest sense and include without limitation any and all hazardous or toxic substances, materials or waste as defined by or listed

**DEED OF TRUST  
(Continued)**

Loan No: 582921

Page 11

under the Environmental Laws. The term "Hazardous Substances" also includes, without limitation, petroleum and petroleum by-products or any fraction thereof and asbestos.

**Improvements.** The word "Improvements" means all existing and future improvements, buildings, structures, mobile homes affixed on the Real Property, facilities, additions, replacements and other construction on the Real Property.

**Indebtedness.** The word "Indebtedness" means all principal, interest, and other amounts, costs and expenses payable under the Note or Related Documents, together with all renewals of, extensions of, modifications of, consolidations of and substitutions for the Note or Related Documents and any amounts expended or advanced by Lender to discharge Grantor's obligations or expenses incurred by Trustee or Lender to enforce Grantor's obligations under this Deed of Trust, together with interest on such amounts as provided in this Deed of Trust.

**Lender.** The word "Lender" means East West Bank, its successors and assigns.

**Note.** The word "Note" means the promissory note dated August 18, 2014, in the original principal amount of **\$7,700,000.00** from Grantor to Lender, together with all renewals of, extensions of, modifications of, refinancings of, consolidations of, and substitutions for the promissory note or agreement. **NOTICE TO GRANTOR: THE NOTE CONTAINS A VARIABLE INTEREST RATE.**

**Personal Property.** The words "Personal Property" mean all equipment, fixtures, and other articles of personal property now or hereafter owned by Grantor, and now or hereafter attached or affixed to the Real Property; together with all accessions, parts, and additions to, all replacements of, and all substitutions for, any of such property; and together with all issues and profits thereon and proceeds (including without limitation all insurance proceeds and refunds of premiums) from any sale or other disposition of the Property.

**Property.** The word "Property" means collectively the Real Property and the Personal Property.

**Real Property.** The words "Real Property" mean the real property, interests and rights, as further described in this Deed of Trust.

**Related Documents.** The words "Related Documents" mean all promissory notes, credit agreements, loan agreements, environmental agreements, security agreements, mortgages, deeds of trust, security deeds, collateral mortgages, and all other instruments, agreements and documents, whether now or hereafter existing, executed in connection with the Indebtedness; provided, that guaranties are not "Related Documents" and are not secured by this Deed of Trust.

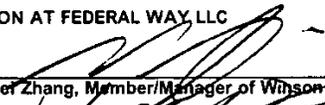
**Rents.** The word "Rents" means all present and future rents, revenues, income, issues, royalties, profits, and other benefits derived from the Property.

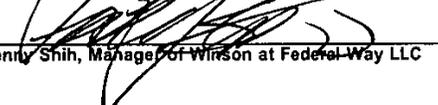
**Trustee.** The word "Trustee" means First American Title Insurance Company, whose mailing address is 818 Stewart Street, Suite 800, Seattle, WA 98101 and any substitute or successor trustees.

**GRANTOR ACKNOWLEDGES HAVING READ ALL THE PROVISIONS OF THIS DEED OF TRUST, AND GRANTOR AGREES TO ITS TERMS.**

GRANTOR:

WINSON AT FEDERAL WAY LLC

By:   
Wei Zhang, Member/Manager of Winson at Federal Way LLC

By:   
Jenny Shih, Manager of Winson at Federal Way LLC

DEED OF TRUST  
(Continued)

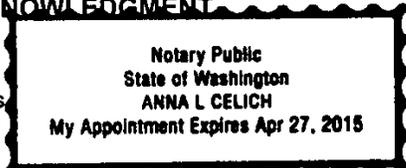
Loan No: 582921

Page 12

LIMITED LIABILITY COMPANY ACKNOWLEDGMENT

STATE OF Washington  
COUNTY OF King

)  
) SS  
)



On this 21<sup>st</sup> day of August, 20 14, before me, the undersigned Notary Public, personally appeared Wei Zhang, Member/Manager of Winson at Federal Way LLC, and personally known to me or proved to me on the basis of satisfactory evidence to be a member or designated agent of the limited liability company that executed the Deed of Trust and acknowledged the Deed of Trust to be the free and voluntary act and deed of the limited liability company, by authority of statute, its articles of organization or its operating agreement, for the uses and purposes therein mentioned, and on oath stated that he or she is authorized to execute this Deed of Trust and in fact executed the Deed of Trust on behalf of the limited liability company.

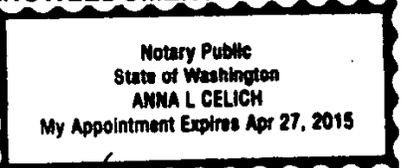
By Anna L Celich  
Notary Public in and for the State of wa

Residing at Seattle  
My commission expires 4/27/14

LIMITED LIABILITY COMPANY ACKNOWLEDGMENT

STATE OF Washington  
COUNTY OF King

)  
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)



On this 21<sup>st</sup> day of August, 20 14, before me, the undersigned Notary Public, personally appeared Jenny Shih, Manager of Winson at Federal Way LLC, and personally known to me or proved to me on the basis of satisfactory evidence to be a member or designated agent of the limited liability company that executed the Deed of Trust and acknowledged the Deed of Trust to be the free and voluntary act and deed of the limited liability company, by authority of statute, its articles of organization or its operating agreement, for the uses and purposes therein mentioned, and on oath stated that he or she is authorized to execute this Deed of Trust and in fact executed the Deed of Trust on behalf of the limited liability company.

By Anna L Celich  
Notary Public in and for the State of wa

Residing at Seattle  
My commission expires 4/27/15

REQUEST FOR FULL RECONVEYANCE

To: \_\_\_\_\_, Trustee

The undersigned is the legal owner and holder of all indebtedness secured by this Deed of Trust. You are hereby requested, upon payment of all sums owing to you, to reconvey without warranty, to the persons entitled thereto, the right, title and interest now held by you under the Deed of Trust.

Date: \_\_\_\_\_

Beneficiary: \_\_\_\_\_  
By: \_\_\_\_\_  
Its: \_\_\_\_\_

Loan No: 582921

**DEED OF TRUST  
(Continued)**

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LASER PRO Lending, Ver. 14.1.0.009 Copr. Harland Financial Solutions, Inc. 1997, 2014. All Rights Reserved. -  
WA F:\PROD\LOANDOC\CF\ILPL\G01.FC TR-20485 PR-161

**RETURN ADDRESS:**

East West Bank  
Loan Service Department  
9300 Flair Drive, 6th Floor  
El Monte, CA 91731



**20140825001073**

FIDELITY (MAJO ASNR 79.00  
PAGE-001 OF 008  
08/25/2014 15:34  
KING COUNTY, WA

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**ASSIGNMENT OF RENTS**

Reference # (if applicable): 582921

Additional on page \_\_\_\_

Grantor(s):

- 1. Winson at Federal Way LLC

Grantee(s)

- 1. East West Bank

Legal Description: LOTS 1 AND 6 AND TRACT A OF AMENDED EVERGREEN PLAZA BSP  
REC# 20030909000708

Additional on page \_\_\_\_

Assessor's Tax Parcel ID#: 242320 0050, 242320 0060, and 242320 0010

**THIS ASSIGNMENT OF RENTS dated August 18, 2014, is made and executed between Winson at Federal Way LLC, a Washington limited liability company (referred to below as "Grantor") and East West Bank, whose mailing address is 9300 Flair Drive, 6th Floor, El Monte, CA 91731 (referred to below as "Lender").**

Recorded at the request of  
**FIDELITY NATIONAL TITLE  
MAJOR ACCOUNTS**

Order # 20369453 (8)79

**ASSIGNMENT OF RENTS  
(Continued)**

Loan No: 582921

Page 2

**ASSIGNMENT.** For valuable consideration, Grantor hereby assigns, grants a continuing security interest in, and conveys to Lender all of Grantor's right, title, and interest in and to the Rents from the following described Property located in King County, State of Washington:

**LOTS 1 AND 6 AND TRACT A OF AMENDMENT TO EVERGREEN PLAZA BINDING SITE PLAN / PUD, RECORDED SEPTEMBER 9, 2003 UNDER RECORDING NO. 20030909000708 IN VOLUME 216, PAGES 36 TO 38, IN KING COUNTY, WASHINGTON;**

**EXCEPTING THEREFROM THAT PORTION CONVEYED TO THE CITY OF FEDERAL WAY BY DEED RECORDED UNDER KING COUNTY RECORDING NO. 20050524000385.**

**SITUATE IN THE CITY OF FEDERAL WAY, COUNTY OF KING, STATE OF WASHINGTON.**

**The DEFINITION of "Related Documents" is hereby amended to read as follows:**

**Related Documents.** The words "Related Documents" mean all promissory notes, credit agreements, loan agreements, security agreements, mortgages, deeds of trust, security deeds, collateral mortgages, Interest Rate Derivative Documentation, and all other instruments, agreements and documents, whether now or hereafter existing, executed in connection with the Indebtedness; except that the words do not mean any guaranty or environmental agreement, whether now or hereafter existing, executed in connection with the Indebtedness.

**The following DEFINITION is hereby added to the Agreement:**

**Interest Rate Derivative Documentation.** The words "Interest Rate Derivative Documentation" mean each trade confirmation, and the international swaps and derivative association master and schedule agreement executed in connection with the Indebtedness

**The Property or its address is commonly known as 2120 - 2210 S. 320th Street, Federal Way, WA 98003. The Property tax identification number is 242320 0050, 242320 0060, and 242320 0010.**

**THIS ASSIGNMENT IS GIVEN TO SECURE (1) PAYMENT OF THE INDEBTEDNESS AND (2) PERFORMANCE OF ANY AND ALL OBLIGATIONS OF GRANTOR UNDER THE NOTE, THIS ASSIGNMENT, AND THE RELATED DOCUMENTS. THIS ASSIGNMENT IS GIVEN AND ACCEPTED ON THE FOLLOWING TERMS:**

**PAYMENT AND PERFORMANCE.** Except as otherwise provided in this Assignment or any Related Documents, Grantor shall pay to Lender all amounts secured by this Assignment as they become due, and shall strictly perform all of Grantor's obligations under this Assignment. Unless and until Lender exercises its right to collect the Rents as provided below and so long as there is no default under this Assignment, Grantor may remain in possession and control of and operate and manage the Property and collect the Rents, provided that the granting of the right to collect the Rents shall not constitute Lender's consent to the use of cash collateral in a bankruptcy proceeding.

**GRANTOR'S REPRESENTATIONS AND WARRANTIES.** Grantor warrants that:

**Ownership.** Grantor is entitled to receive the Rents free and clear of all rights, loans, liens, encumbrances, and claims except as disclosed to and accepted by Lender in writing.

**Right to Assign.** Grantor has the full right, power and authority to enter into this Assignment and to assign and convey the Rents to Lender.

**No Prior Assignment.** Grantor has not previously assigned or conveyed the Rents to any other person by any instrument now in force.

**No Further Transfer.** Grantor will not sell, assign, encumber, or otherwise dispose of any of Grantor's rights in the Rents except as provided in this Assignment.

## ASSIGNMENT OF RENTS (Continued)

Loan No: 582921

Page 3

**LENDER'S RIGHT TO RECEIVE AND COLLECT RENTS.** Lender shall have the right at any time, and even though no default shall have occurred under this Assignment, to collect and receive the Rents. For this purpose, Lender is hereby given and granted the following rights, powers and authority:

**Notice to Tenants.** Lender may send notices to any and all tenants of the Property advising them of this Assignment and directing all Rents to be paid directly to Lender or Lender's agent.

**Enter the Property.** Lender may enter upon and take possession of the Property; demand, collect and receive from the tenants or from any other persons liable therefor, all of the Rents; institute and carry on all legal proceedings necessary for the protection of the Property, including such proceedings as may be necessary to recover possession of the Property; collect the Rents and remove any tenant or tenants or other persons from the Property.

**Maintain the Property.** Lender may enter upon the Property to maintain the Property and keep the same in repair; to pay the costs thereof and of all services of all employees, including their equipment, and of all continuing costs and expenses of maintaining the Property in proper repair and condition, and also to pay all taxes, assessments and water utilities, and the premiums on fire and other insurance effected by Lender on the Property.

**Compliance with Laws.** Lender may do any and all things to execute and comply with the laws of the State of Washington and also all other laws, rules, orders, ordinances and requirements of all other governmental agencies affecting the Property.

**Lease the Property.** Lender may rent or lease the whole or any part of the Property for such term or terms and on such conditions as Lender may deem appropriate.

**Employ Agents.** Lender may engage such agent or agents as Lender may deem appropriate, either in Lender's name or in Grantor's name, to rent and manage the Property, including the collection and application of Rents.

**Other Acts.** Lender may do all such other things and acts with respect to the Property as Lender may deem appropriate and may act exclusively and solely in the place and stead of Grantor and to have all of the powers of Grantor for the purposes stated above.

**No Requirement to Act.** Lender shall not be required to do any of the foregoing acts or things, and the fact that Lender shall have performed one or more of the foregoing acts or things shall not require Lender to do any other specific act or thing.

**APPLICATION OF RENTS.** All costs and expenses incurred by Lender in connection with the Property shall be for Grantor's account and Lender may pay such costs and expenses from the Rents. Lender, in its sole discretion, shall determine the application of any and all Rents received by it; however, any such Rents received by Lender which are not applied to such costs and expenses shall be applied to the Indebtedness. All expenditures made by Lender under this Assignment and not reimbursed from the Rents shall become a part of the Indebtedness secured by this Assignment, and shall be payable on demand, with interest at the Note rate from date of expenditure until paid.

**FULL PERFORMANCE.** If Grantor pays all of the Indebtedness when due and otherwise performs all the obligations imposed upon Grantor under this Assignment, the Note, and the Related Documents, Lender shall execute and deliver to Grantor a suitable satisfaction of this Assignment and suitable statements of termination of any financing statement on file evidencing Lender's security interest in the Rents and the Property. Any termination fee required by law shall be paid by Grantor, if permitted by applicable law.

**LENDER'S EXPENDITURES.** If any action or proceeding is commenced that would materially affect Lender's interest in the Property or if Grantor fails to comply with any provision of this Assignment or any Related Documents, including but not limited to Grantor's failure to discharge or pay when due any amounts Grantor is required to discharge or pay under this Assignment or any Related Documents, Lender on Grantor's behalf may (but shall not be obligated to) take any action that Lender deems appropriate, including but not limited to discharging or paying all taxes, liens, security interests, encumbrances and other claims, at any time levied or placed on the Rents or the Property and paying all costs for insuring, maintaining and preserving the Property. All such expenditures incurred or paid by Lender for such purposes will then bear interest at the rate charged under the Note from the date incurred or paid by Lender to the date of repayment by Grantor. All such expenses will become a part of the Indebtedness and, at Lender's option, will (A) be payable on demand; (B) be added to the balance of the Note and be apportioned among and be payable with any installment payments to become due during either (1) the term of any applicable insurance policy; or (2) the remaining term of the Note; or (C) be treated as a balloon payment which will be due and payable at the Note's maturity. The Assignment also will secure payment of these amounts. Such right shall be in addition to all other rights and remedies to which Lender may be entitled upon Default.

**DEFAULT.** Each of the following, at Lender's option, shall constitute an Event of Default under this Assignment:

**Payment Default.** Grantor fails to make any payment when due under the Indebtedness.

**Other Defaults.** Grantor fails to comply with or to perform any other term, obligation, covenant or condition contained in this Assignment or in any of the Related Documents or to comply with or to perform any term, obligation, covenant or condition contained in any other agreement between Lender and Grantor.

## ASSIGNMENT OF RENTS (Continued)

Loan No: 582921

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**Default on Other Payments.** Failure of Grantor within the time required by this Assignment to make any payment for taxes or insurance, or any other payment necessary to prevent filing of or to effect discharge of any lien.

**Default in Favor of Third Parties.** Any guarantor or Grantor defaults under any loan, extension of credit, security agreement, purchase or sales agreement, or any other agreement, in favor of any other creditor or person that may materially affect any of any guarantor's or Grantor's property or ability to perform their respective obligations under this Assignment or any of the Related Documents.

**Environmental Default.** Failure of any party to comply with or perform when due any term, obligation, covenant or condition contained in any environmental agreement executed in connection with the Property.

**False Statements.** Any warranty, representation or statement made or furnished to Lender by Grantor or on Grantor's behalf under this Assignment or the Related Documents is false or misleading in any material respect, either now or at the time made or furnished or becomes false or misleading at any time thereafter.

**Defective Collateralization.** This Assignment or any of the Related Documents ceases to be in full force and effect (including failure of any collateral document to create a valid and perfected security interest or lien) at any time and for any reason.

**Death or Insolvency.** The dissolution of Grantor's (regardless of whether election to continue is made), any member withdraws from the limited liability company, or any other termination of Grantor's existence as a going business or the death of any member, the insolvency of Grantor, the appointment of a receiver for any part of Grantor's property, any assignment for the benefit of creditors, any type of creditor workout, or the commencement of any proceeding under any bankruptcy or insolvency laws by or against Grantor.

**Creditor or Forfeiture Proceedings.** Commencement of foreclosure or forfeiture proceedings, whether by judicial proceeding, self-help, repossession or any other method, by any creditor of Grantor or by any governmental agency against the Rents or any property securing the Indebtedness. This includes a garnishment of any of Grantor's accounts, including deposit accounts, with Lender. However, this Event of Default shall not apply if there is a good faith dispute by Grantor as to the validity or reasonableness of the claim which is the basis of the creditor or forfeiture proceeding and if Grantor gives Lender written notice of the creditor or forfeiture proceeding and deposits with Lender monies or a surety bond for the creditor or forfeiture proceeding, in an amount determined by Lender, in its sole discretion, as being an adequate reserve or bond for the dispute.

**Property Damage or Loss.** The Property is lost, stolen, substantially damaged, sold, or borrowed against.

**Events Affecting Guarantor.** Any of the preceding events occurs with respect to any Guarantor of any of the Indebtedness or any Guarantor dies or becomes incompetent, or revokes or disputes the validity of, or liability under, any Guaranty of the Indebtedness.

**Adverse Change.** A material adverse change occurs in Grantor's financial condition, or Lender believes the prospect of payment or performance of the Indebtedness is impaired.

**Cure Provisions.** If any default, other than a default in payment is curable and if Grantor has not been given a notice of a breach of the same provision of this Assignment within the preceding twelve (12) months, it may be cured if Grantor, after Lender sends written notice to Grantor demanding cure of such default: (1) cures the default within fifteen (15) days; or (2) if the cure requires more than fifteen (15) days, immediately initiates steps which Lender deems in Lender's sole discretion to be sufficient to cure the default and thereafter continues and completes all reasonable and necessary steps sufficient to produce compliance as soon as reasonably practical.

**RIGHTS AND REMEDIES ON DEFAULT.** Upon the occurrence of any Event of Default and at any time thereafter, Lender may exercise any one or more of the following rights and remedies, in addition to any other rights or remedies provided by law:

**Accelerate Indebtedness.** Lender shall have the right at its option without notice to Grantor to declare the entire Indebtedness immediately due and payable, including any prepayment penalty that Grantor would be required to pay.

**Collect Rents.** Lender shall have the right, without notice to Grantor, to take possession of the Property and collect the Rents, including amounts past due and unpaid, and apply the net proceeds, over and above Lender's costs, against the Indebtedness. In furtherance of this right, Lender shall have all the rights provided for in the Lender's Right to Receive and Collect Rents Section, above. If the Rents are collected by Lender, then Grantor irrevocably designates Lender as Grantor's attorney-in-fact to endorse instruments received in payment thereof in the name of Grantor and to negotiate the same and collect the proceeds. Payments by tenants or other users to Lender in response to Lender's demand shall satisfy the obligations for which the payments are made, whether or not any proper grounds for the demand existed. Lender may exercise its rights under this subparagraph either in person, by agent, or through a receiver.

**Appoint Receiver.** Lender shall have the right to have a receiver appointed to take possession of all or any part of the Property, with the power to protect and preserve the Property, to operate the Property preceding or pending

**ASSIGNMENT OF RENTS  
(Continued)**

Loan No: 582921

Page 5

foreclosure or sale, and to collect the Rents from the Property and apply the proceeds, over and above the cost of the receivership, against the Indebtedness. The receiver may serve without bond if permitted by law. Lender's right to the appointment of a receiver shall exist whether or not the apparent value of the Property exceeds the Indebtedness by a substantial amount. Employment by Lender shall not disqualify a person from serving as a receiver.

**Other Remedies.** Lender shall have all other rights and remedies provided in this Assignment or the Note or by law.

**Election of Remedies.** Election by Lender to pursue any remedy shall not exclude pursuit of any other remedy, and an election to make expenditures or to take action to perform an obligation of Grantor under this Assignment, after Grantor's failure to perform, shall not affect Lender's right to declare a default and exercise its remedies.

**Attorneys' Fees; Expenses.** If Lender institutes any suit or action to enforce any of the terms of this Assignment, Lender shall be entitled to recover such sum as the court may adjudge reasonable as attorneys' fees at trial and upon any appeal. Whether or not any court action is involved, and to the extent not prohibited by law, all reasonable expenses Lender incurs that in Lender's opinion are necessary at any time for the protection of its interest or the enforcement of its rights shall become a part of the Indebtedness payable on demand and shall bear interest at the Note rate from the date of the expenditure until repaid. Expenses covered by this paragraph include, without limitation, however subject to any limits under applicable law, Lender's attorneys' fees and Lender's legal expenses, whether or not there is a lawsuit, including attorneys' fees and expenses for bankruptcy proceedings (including efforts to modify or vacate any automatic stay or injunction), appeals, and any anticipated post-judgment collection services, the cost of searching records, obtaining title reports (including foreclosure reports), surveyors' reports, and appraisal fees, title insurance, and fees for the Trustee, to the extent permitted by applicable law. Grantor also will pay any court costs, in addition to all other sums provided by law.

**CHOICE OF VENUE.** If there is a lawsuit, Borrower agrees upon Lender's request to submit to the Jurisdiction of the court of King County, State of Washington.

**COUNTERPART PROVISION.** This document may be signed in any number of counterparts, which, when delivered in the original to Lender, shall together constitute one original document.

**MISCELLANEOUS PROVISIONS.** The following miscellaneous provisions are a part of this Assignment:

**Amendments.** This Assignment, together with any Related Documents, constitutes the entire understanding and agreement of the parties as to the matters set forth in this Assignment. No alteration of or amendment to this Assignment shall be effective unless given in writing and signed by the party or parties sought to be charged or bound by the alteration or amendment.

**Caption Headings.** Caption headings in this Assignment are for convenience purposes only and are not to be used to interpret or define the provisions of this Assignment.

**Governing Law.** This Assignment will be governed by federal law applicable to Lender and, to the extent not preempted by federal law, the laws of the State of Washington without regard to its conflicts of law provisions. This Assignment has been accepted by Lender in the State of Washington.

**Merger.** There shall be no merger of the interest or estate created by this assignment with any other interest or estate in the Property at any time held by or for the benefit of Lender in any capacity, without the written consent of Lender.

**Interpretation.** (1) In all cases where there is more than one Borrower or Grantor, then all words used in this Assignment in the singular shall be deemed to have been used in the plural where the context and construction so require. (2) If more than one person signs this Assignment as "Grantor," the obligations of each Grantor are joint and several. This means that if Lender brings a lawsuit, Lender may sue any one or more of the Grantors. If Borrower and Grantor are not the same person, Lender need not sue Borrower first, and that Borrower need not be joined in any lawsuit. (3) The names given to paragraphs or sections in this Assignment are for convenience purposes only. They are not to be used to interpret or define the provisions of this Assignment.

**No Waiver by Lender.** Lender shall not be deemed to have waived any rights under this Assignment unless such waiver is given in writing and signed by Lender. No delay or omission on the part of Lender in exercising any right shall operate as a waiver of such right or any other right. A waiver by Lender of a provision of this Assignment shall not prejudice or constitute a waiver of Lender's right otherwise to demand strict compliance with that provision or any other provision of this Assignment. No prior waiver by Lender, nor any course of dealing between Lender and Grantor, shall constitute a waiver of any of Lender's rights or of any of Grantor's obligations as to any future transactions. Whenever the consent of Lender is required under this Assignment, the granting of such consent by Lender in any instance shall not constitute continuing consent to subsequent instances where such consent is required and in all cases such consent may be granted or withheld in the sole discretion of Lender.

**Notices.** Subject to applicable law, and except for notice required or allowed by law to be given in another

**ASSIGNMENT OF RENTS  
(Continued)**

Loan No: 582921

Page 6

manner, any notice required to be given under this Assignment shall be given in writing, and shall be effective when actually delivered, when actually received by telefacsimile (unless otherwise required by law), when deposited with a nationally recognized overnight courier, or, if mailed, when deposited in the United States mail, as first class, certified or registered mail postage prepaid, directed to the addresses shown near the beginning of this Assignment. Any party may change its address for notices under this Assignment by giving formal written notice to the other parties, specifying that the purpose of the notice is to change the party's address. For notice purposes, Grantor agrees to keep Lender informed at all times of Grantor's current address. Subject to applicable law, and except for notice required or allowed by law to be given in another manner, if there is more than one Grantor, any notice given by Lender to any Grantor is deemed to be notice given to all Grantors.

**Powers of Attorney.** The various agencies and powers of attorney conveyed on Lender under this Assignment are granted for purposes of security and may not be revoked by Grantor until such time as the same are renounced by Lender.

**Severability.** If a court of competent jurisdiction finds any provision of this Assignment to be illegal, invalid, or unenforceable as to any circumstance, that finding shall not make the offending provision illegal, invalid, or unenforceable as to any other circumstance. If feasible, the offending provision shall be considered modified so that it becomes legal, valid and enforceable. If the offending provision cannot be so modified, it shall be considered deleted from this Assignment. Unless otherwise required by law, the illegality, invalidity, or unenforceability of any provision of this Assignment shall not affect the legality, validity or enforceability of any other provision of this Assignment.

**Successors and Assigns.** Subject to any limitations stated in this Assignment on transfer of Grantor's interest, this Assignment shall be binding upon and inure to the benefit of the parties, their successors and assigns. If ownership of the Property becomes vested in a person other than Grantor, Lender, without notice to Grantor, may deal with Grantor's successors with reference to this Assignment and the Indebtedness by way of forbearance or extension without releasing Grantor from the obligations of this Assignment or liability under the Indebtedness.

**Time is of the Essence.** Time is of the essence in the performance of this Assignment.

**Waive Jury.** All parties to this Assignment hereby waive the right to any jury trial in any action, proceeding, or counterclaim brought by any party against any other party.

**Waiver of Homestead Exemption.** Grantor hereby releases and waives all rights and benefits of the homestead exemption laws of the State of Washington as to all Indebtedness secured by this Assignment.

**Waiver of Right of Redemption.** NOTWITHSTANDING ANY OF THE PROVISIONS TO THE CONTRARY CONTAINED IN THIS ASSIGNMENT, GRANTOR HEREBY WAIVES ANY AND ALL RIGHTS OF REDEMPTION FROM SALE UNDER ANY ORDER OR JUDGMENT OF FORECLOSURE ON GRANTOR'S BEHALF AND ON BEHALF OF EACH AND EVERY PERSON, EXCEPT JUDGMENT CREDITORS OF GRANTOR, ACQUIRING ANY INTEREST IN OR TITLE TO THE PROPERTY SUBSEQUENT TO THE DATE OF THIS ASSIGNMENT.

**DEFINITIONS.** The following capitalized words and terms shall have the following meanings when used in this Assignment. Unless specifically stated to the contrary, all references to dollar amounts shall mean amounts in lawful money of the United States of America. Words and terms used in the singular shall include the plural, and the plural shall include the singular, as the context may require. Words and terms not otherwise defined in this Assignment shall have the meanings attributed to such terms in the Uniform Commercial Code:

**Assignment.** The word "Assignment" means this ASSIGNMENT OF RENTS, as this ASSIGNMENT OF RENTS may be amended or modified from time to time, together with all exhibits and schedules attached to this ASSIGNMENT OF RENTS from time to time.

**Borrower.** The word "Borrower" means Winson at Federal Way LLC.

**Default.** The word "Default" means the Default set forth in this Assignment in the section titled "Default".

**Event of Default.** The words "Event of Default" mean any of the events of default set forth in this Assignment in the default section of this Assignment.

**Grantor.** The word "Grantor" means Winson at Federal Way LLC.

**Guarantor.** The word "Guarantor" means any guarantor, surety, or accommodation party of any or all of the Indebtedness.

**Guaranty.** The word "Guaranty" means the guaranty from Guarantor to Lender, including without limitation a guaranty of all or part of the Note.

**Indebtedness.** The word "Indebtedness" means all principal, interest, and other amounts, costs and expenses payable under the Note or Related Documents, together with all renewals of, extensions of, modifications of, consolidations of and substitutions for the Note or Related Documents and any amounts expended or advanced by Lender to discharge Grantor's obligations or expenses incurred by Lender to enforce Grantor's obligations under

**ASSIGNMENT OF RENTS  
(Continued)**

Loan No: 582921

Page 7

this Assignment, together with interest on such amounts as provided in this Assignment.

**Lender.** The word "Lender" means East West Bank, its successors and assigns.

**Note.** The word "Note" means the promissory note dated August 18, 2014, in the original principal amount of **\$7,700,000.00** from Grantor to Lender, together with all renewals of, extensions of, modifications of, refinancings of, consolidations of, and substitutions for the promissory note or agreement.

**Property.** The word "Property" means all of Grantor's right, title and interest in and to all the Property as described in the "Assignment" section of this Assignment.

**Related Documents.** The words "Related Documents" mean all promissory notes, credit agreements, loan agreements, environmental agreements, guaranties, security agreements, mortgages, deeds of trust, security deeds, collateral mortgages, and all other instruments, agreements and documents, whether now or hereafter existing, executed in connection with the indebtedness.

**Rents.** The word "Rents" means all of Grantor's present and future rights, title and interest in, to and under any and all present and future leases, including, without limitation, all rents, revenue, income, issues, royalties, bonuses, accounts receivable, cash or security deposits, advance rentals, profits and proceeds from the Property, and other payments and benefits derived or to be derived from such leases of every kind and nature, whether due now or later, including without limitation Grantor's right to enforce such leases and to receive and collect payment and proceeds thereunder.

THE UNDERSIGNED ACKNOWLEDGES HAVING READ ALL THE PROVISIONS OF THIS ASSIGNMENT, AND NOT PERSONALLY BUT AS AN AUTHORIZED SIGNER, HAS CAUSED THIS ASSIGNMENT TO BE SIGNED AND EXECUTED ON BEHALF OF GRANTOR ON AUGUST 18, 2014.

GRANTOR:

WINSON AT FEDERAL WAY LLC

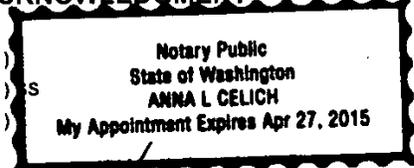
By: [Signature]  
Wei Zhang, Member/Manager of Winson at Federal Way LLC

By: [Signature]  
Jenny Smith, Manager of Winson at Federal Way LLC

**LIMITED LIABILITY COMPANY ACKNOWLEDGMENT**

STATE OF Washington

COUNTY OF King



On this 21<sup>st</sup> day of August, 2014, before me, the undersigned Notary Public, personally appeared Wei Zhang, Member/Manager of Winson at Federal Way LLC, and personally known to me or proved to me on the basis of satisfactory evidence to be a member or designated agent of the limited liability company that executed the ASSIGNMENT OF RENTS and acknowledged the Assignment to be the free and voluntary act and deed of the limited liability company, by authority of statute, its articles of organization or its operating agreement, for the uses and purposes therein mentioned, and on oath stated that he or she is authorized to execute this Assignment and in fact executed the Assignment on behalf of the limited liability company.

By: [Signature]  
Notary Public in and for the State of WA

Residing at Seattle  
My commission expires 4/27/15

ASSIGNMENT OF RENTS  
(Continued)

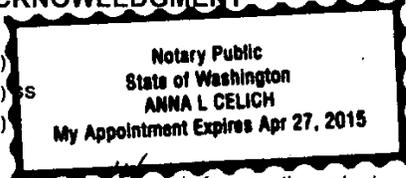
Loan No: 582921

Page 8

LIMITED LIABILITY COMPANY ACKNOWLEDGMENT

STATE OF Washington

COUNTY OF King



On this 21<sup>st</sup> day of August, 2014, before me, the undersigned Notary Public, personally appeared Jenny Shih, Manager of Winson at Federal Way LLC, and personally known to me or proved to me on the basis of satisfactory evidence to be a member or designated agent of the limited liability company that executed the ASSIGNMENT OF RENTS and acknowledged the Assignment to be the free and voluntary act and deed of the limited liability company, by authority of statute, its articles of organization or its operating agreement, for the uses and purposes therein mentioned, and on oath stated that he or she is authorized to execute this Assignment and in fact executed the Assignment on behalf of the limited liability company.

By Anna L Celich  
Notary Public in and for the State of WA

Residing at Seattle  
My commission expires 4/27/15

**RETURN ADDRESS:**

East West Bank  
Loan Service Department  
9300 Flair Drive, 6th Floor  
El Monte, CA 91731



**20140825001074**

FIDELITY (MAJOR HAZ 78.00  
PAGE-001 OF 007  
08/25/2014 15:34  
KING COUNTY, WA

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**HAZARDOUS SUBSTANCES AGREEMENT**

Reference # (if applicable): 582921

Additional on page \_\_\_\_\_

Grantor(s):

- 1. Winson at Federal Way LLC

Grantee(s)

- 1. East West Bank

Legal Description: LOTS 1 AND 6 AND TRACT A OF AMENDED EVERGREEN PLAZA BSP  
REC# 20030909000708

Additional on page \_\_\_\_\_

Assessor's Tax Parcel ID#: 242320 0050, 242320 0060, and 242320 0010

**THIS HAZARDOUS SUBSTANCES AGREEMENT dated August 18, 2014, is made and executed among Winson at Federal Way LLC, whose address is 1120 - 112th Avenue Northeast, Suite 620, Bellevue, WA 98004 (sometimes referred to below as "Borrower" and sometimes as "Indemnitor"); and East West Bank, Loan Servicing Department, 9300 Flair Drive, 6th Floor, El Monte, CA 91731 (referred to below as "Lender").**

Recorded at the request of  
**FIDELITY NATIONAL TITLE  
MAJOR ACCOUNTS**

Order # 20369453 2/78

**HAZARDOUS SUBSTANCES AGREEMENT  
(Continued)**

Loan No: 582921

Page 2

**For good and valuable consideration and to induce Lender to make a loan to Borrower, each party executing this Agreement hereby represents and agrees with Lender as follows:**

**PROPERTY DESCRIPTION.** The word "Property" as used in this Agreement means the following Real Property located in King County, State of Washington:

LOTS 1 AND 6 AND TRACT A OF AMENDMENT TO EVERGREEN PLAZA BINDING SITE PLAN / PUD, RECORDED SEPTEMBER 9, 2003 UNDER RECORDING NO. 20030909000708 IN VOLUME 216, PAGES 36 TO 38, IN KING COUNTY, WASHINGTON;

EXCEPTING THEREFROM THAT PORTION CONVEYED TO THE CITY OF FEDERAL WAY BY DEED RECORDED UNDER KING COUNTY RECORDING NO. 20050524000385.

SITUATE IN THE CITY OF FEDERAL WAY, COUNTY OF KING, STATE OF WASHINGTON.

**The DEFINITION of "Related Documents" is hereby amended to read as follows:**

**Related Documents.** The words "Related Documents" mean all promissory notes, credit agreements, loan agreements, security agreements, mortgages, deeds of trust, security deeds, collateral mortgages, Interest Rate Derivative Documentation, and all other instruments, agreements and documents, whether now or hereafter existing, executed in connection with the Indebtedness; except that the words do not mean any guaranty or environmental agreement, whether now or hereafter existing, executed in connection with the Indebtedness.

**The following DEFINITION is hereby added to the Agreement:**

**Interest Rate Derivative Documentation.** The words "Interest Rate Derivative Documentation" mean each trade confirmation, and the international swaps and derivative association master and schedule agreement executed in connection with the Indebtedness

The Real Property or its address is commonly known as 2120 - 2210 S. 320th Street, Federal Way, WA 98003. The Real Property tax identification number is 242320 0050, 242320 0060, and 242320 0010.

**REPRESENTATIONS.** The following representations are made to Lender, subject to disclosures made and accepted by Lender in writing:

**Use of Property.** After due inquiry and investigation, Indemnitee has no knowledge, or reason to believe, that there has been any use, generation, manufacture, storage, treatment, refinement, transportation, disposal, release, or threatened release of any Hazardous Substances by any person on, under, or about the Property.

**Hazardous Substances.** After due inquiry and investigation, Indemnitee has no knowledge, or reason to believe, that the Property, whenever and whether owned by previous Occupants, has ever contained asbestos, PCBs, lead paints or other Hazardous Substances, whether used in construction or stored on the Property.

**No Notices.** Indemnitee has received no summons, citation, directive, letter or other communication, written or oral, from any agency or department of any county or state or the U.S. Government concerning any intentional or unintentional action or omission on, under, or about the Property which has resulted in the releasing, spilling, leaking, pumping, pouring, emitting, emptying or dumping of Hazardous Substances into any waters, ambient air or onto any lands or where damage may have resulted to the lands, waters, fish, shellfish, wildlife, biota, air or other natural resources.

**AFFIRMATIVE COVENANTS.** Indemnitee covenants with Lender as follows:

**Use of Property.** Indemnitee will not use and does not intend to use the Property to generate, manufacture, refine, transport, treat, store, handle or dispose of any Hazardous Substances, PCBs, lead paint or asbestos.

**Compliance with Environmental Laws.** Indemnitee shall cause the Property and the operations conducted on it to comply with any and all Environmental Laws and orders of any governmental authorities having jurisdiction under any Environmental Laws and shall obtain, keep in effect and comply with all governmental permits and authorizations required by Environmental Laws with respect to such Property or operations. Indemnitee shall furnish Lender with copies of all such permits and authorizations and any amendments or renewals of them and shall notify Lender of any expiration or revocation of such permits or authorizations.

**Preventive, Investigatory and Remedial Action.** Indemnitee shall exercise extreme care in handling Hazardous Substances if Indemnitee uses or encounters any. Indemnitee, at Indemnitee's expense, shall undertake any and all preventive, investigatory or remedial action (including emergency response, removal, containment and other remedial action) (a) required by any applicable Environmental Laws or orders by any governmental authority having jurisdiction under Environmental Laws, or (b) necessary to prevent or minimize property damage (including damage to Occupant's own property), personal injury or damage to the environment, or the threat of any such damage or injury, by releases of or exposure to Hazardous Substances in connection with the Property or operations of any

**HAZARDOUS SUBSTANCES AGREEMENT  
(Continued)**

Loan No: 582921

Page 3

Occupant on the Property. In the event Indemnitor fails to perform any of Indemnitor's obligations under this section of the Agreement, Lender may (but shall not be required to) perform such obligations at Indemnitor's expense. All such costs and expenses incurred by Lender under this section and otherwise under this Agreement shall be reimbursed by Indemnitor to Lender upon demand with interest at the Note default rate, or in the absence of a default rate, at the Note interest rate. Lender and Indemnitor intend that Lender shall have full recourse to Indemnitor for any sum at any time due to Lender under this Agreement. In performing any such obligations of Indemnitor, Lender shall at all times be deemed to be the agent of Indemnitor and shall not by reason of such performance be deemed to be assuming any responsibility of Indemnitor under any Environmental Law or to any third party. Indemnitor hereby irrevocably appoints Lender as Indemnitor's attorney-in-fact with full power to perform such of Indemnitor's obligations under this section of the Agreement as Lender deems necessary and appropriate.

**Notices.** Indemnitor shall immediately notify Lender upon becoming aware of any of the following:

- (1) Any spill, release or disposal of a Hazardous Substance on any of the Property, or in connection with any of its operations if such spill, release or disposal must be reported to any governmental authority under applicable Environmental Laws.
- (2) Any contamination, or imminent threat of contamination, of the Property by Hazardous Substances, or any violation of Environmental Laws in connection with the Property or the operations conducted on the Property.
- (3) Any order, notice of violation, fine or penalty or other similar action by any governmental authority relating to Hazardous Substances or Environmental Laws and the Property or the operations conducted on the Property.
- (4) Any judicial or administrative investigation or proceeding relating to Hazardous Substances or Environmental Laws and to the Property or the operations conducted on the Property.
- (5) Any matters relating to Hazardous Substances or Environmental Laws that would give a reasonably prudent Lender cause to be concerned that the value of Lender's security interest in the Property may be reduced or threatened or that may impair, or threaten to impair, Indemnitor's ability to perform any of its obligations under this Agreement when such performance is due.

**Access to Records.** Indemnitor shall deliver to Lender, at Lender's request, copies of any and all documents in Indemnitor's possession or to which it has access relating to Hazardous Substances or Environmental Laws and the Property and the operations conducted on the Property, including without limitation results of laboratory analyses, site assessments or studies, environmental audit reports and other consultants' studies and reports.

**Inspections.** Lender reserves the right to inspect and investigate the Property and operations on it at any time and from time to time, and Indemnitor shall cooperate fully with Lender in such inspection and investigations. If Lender at any time has reason to believe that Indemnitor or any Occupants of the Property are not complying with all applicable Environmental Laws or with the requirements of this Agreement or that a material spill, release or disposal of Hazardous Substances has occurred on or under the Property, Lender may require Indemnitor to furnish Lender at Indemnitor's expense an environmental audit or a site assessment with respect to the matters of concern to Lender. Such audit or assessment shall be performed by a qualified consultant approved by Lender. Any inspections or tests made by Lender shall be for Lender's purposes only and shall not be construed to create any responsibility or liability on the part of Lender to any Indemnitor or to any other person.

**INDEMNITOR'S WAIVER AND INDEMNIFICATION.** Indemnitor hereby agrees to and shall indemnify, defend, and hold harmless Lender and Lender's officers, directors, employees and agents, and Lender's successors and assigns and their officers, directors, employees and agents from and against any and all claims, demands, losses, liabilities, costs, fines, penalties and expenses (including without limitation attorneys' fees at trial and on any appeal or petition for review, consultants' fees, remedial action costs, natural resource damages and diminution in value) incurred by such person (a) arising out of or relating to any investigatory or remedial action involving the Property, the operations conducted on the Property, or any other operations of Indemnitor or any Occupant and required by Environmental Laws or by orders of any governmental authority having jurisdiction under any Environmental Laws, including without limitation any natural resource damages, or (b) arising out of or related to any noncompliance with or violation of Environmental Laws or any applicable permits or approvals, or (c) on account of injury to Lender or any person whatsoever or damage to any property arising out of, in connection with, or in any way relating to (i) the breach of any covenant, representation or warranty contained in this Agreement, (ii) the violation of any Environmental Laws, permits, authorizations or approvals, (iii) the use, treatment, storage, generation, manufacture, transport, release, spill, disposal or other handling of Hazardous Substances on the Property, or (iv) the contamination of any of the Property by, or the presence, release or threatened release of, Hazardous Substances by any means whatsoever (explicitly including without limitation any presently existing contamination of the Property, whether or not previously disclosed to Lender), or (d) pursuant to this Agreement. Indemnitor's obligations under this section shall survive the termination of this Agreement and as set forth below in the Survival section. In addition to this indemnity, Indemnitor hereby releases and waives all present and

**HAZARDOUS SUBSTANCES AGREEMENT  
(Continued)**

Loan No: 582921

Page 4

future claims against Lender for indemnity or contribution in the event Indemnitor becomes liable for cleanup or other costs under any Environmental Laws.

**PAYMENT: FULL RECOURSE TO INDEMNITOR.** Indemnitor intends that Lender shall have full recourse to Indemnitor for Indemnitor's obligations under this Agreement as they become due to Lender. Such liabilities, losses, claims, damages and expenses shall be reimbursable to Lender as Lender's obligations to make payments with respect thereto are incurred, without any requirement of waiting for the ultimate outcome of any litigation, claim or other proceeding, and Indemnitor shall pay such liability, losses, claims, damages and expenses to Lender as so incurred within thirty (30) days after written notice from Lender. Lender's notice shall contain a brief itemization of the amounts incurred to the date of such notice. In addition to any remedy available for failure to pay periodically such amounts, such amounts shall thereafter bear interest at the Note default rate, or in the absence of a default rate, at the Note interest rate.

**SURVIVAL.** The covenants contained in this Agreement shall survive (A) the repayment of the Indebtedness, (B) any foreclosure, whether judicial or nonjudicial, of the Property, and (C) any delivery of a deed in lieu of foreclosure to Lender or any successor of Lender. The covenants contained in this Agreement shall be for the benefit of Lender and any successor to Lender, as holder of any security interest in the Property or the indebtedness secured thereby, or as owner of the Property following foreclosure or the delivery of a deed in lieu of foreclosure.

**CHOICE OF VENUE.** If there is a lawsuit, Borrower agrees upon Lender's request to submit to the Jurisdiction of the court of King County, State of Washington.

**COUNTERPART PROVISION.** This document may be signed in any number of counterparts, which, when delivered in the original to Lender, shall together constitute one original document.

**MISCELLANEOUS PROVISIONS.** The following miscellaneous provisions are a part of this Agreement:

**Amendments.** This Agreement, together with any Related Documents, constitutes the entire understanding and agreement of the parties as to the matters set forth in this Agreement. No alteration of or amendment to this Agreement shall be effective unless given in writing and signed by the party or parties sought to be charged or bound by the alteration or amendment.

**Attorneys' Fees; Expenses.** If Lender institutes any suit or action to enforce any of the terms of this Agreement, Lender shall be entitled to recover such sum as the court may adjudge reasonable as attorneys' fees at trial and upon any appeal. Whether or not any court action is involved, and to the extent not prohibited by law, all reasonable expenses Lender incurs that in Lender's opinion are necessary at any time for the protection of its interest or the enforcement of its rights shall become a part of the Indebtedness payable on demand and shall bear interest at the Note rate from the date of the expenditure until repaid. Expenses covered by this paragraph include, without limitation, however subject to any limits under applicable law, Lender's attorneys' fees and Lender's legal expenses, whether or not there is a lawsuit, including attorneys' fees and expenses for bankruptcy proceedings (including efforts to modify or vacate any automatic stay or injunction), appeals, and any anticipated post-judgment collection services, the cost of searching records, obtaining title reports (including foreclosure reports), surveyors' reports, and appraisal fees and title insurance, to the extent permitted by applicable law. Indemnitor also will pay any court costs, in addition to all other sums provided by law.

**Caption Headings.** Caption headings in this Agreement are for convenience purposes only and are not to be used to interpret or define the provisions of this Agreement.

**Governing Law.** This Agreement will be governed by federal law applicable to Lender and, to the extent not preempted by federal law, the laws of the State of Washington without regard to its conflicts of law provisions. This Agreement has been accepted by Lender in the State of Washington.

**Joint and Several Liability.** All obligations of Indemnitor under this Agreement shall be joint and several, and all references to Indemnitor shall mean each and every Indemnitor. This means that each Indemnitor signing below is responsible for all obligations in this Agreement.

**No Waiver by Lender.** Lender shall not be deemed to have waived any rights under this Agreement unless such waiver is given in writing and signed by Lender. No delay or omission on the part of Lender in exercising any right shall operate as a waiver of such right or any other right. A waiver by Lender of a provision of this Agreement shall not prejudice or constitute a waiver of Lender's right otherwise to demand strict compliance with that provision or any other provision of this Agreement. No prior waiver by Lender, nor any course of dealing between Lender and Indemnitor, shall constitute a waiver of any of Lender's rights or of any of Indemnitor's obligations as to any future transactions. Whenever the consent of Lender is required under this Agreement, the granting of such consent by Lender in any instance shall not constitute continuing consent to subsequent instances where such consent is required and in all cases such consent may be granted or withheld in the sole discretion of Lender. Indemnitor hereby waives notice of acceptance of this Agreement by Lender.

**Notices.** Subject to applicable law, and except for notice required or allowed by law to be given in another manner, any notice required to be given under this Agreement shall be given in writing, and shall be effective when actually delivered, when actually received by telefacsimile (unless otherwise required by law), when deposited with

**HAZARDOUS SUBSTANCES AGREEMENT  
(Continued)**

Loan No: 582921

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a nationally recognized overnight courier, or, if mailed, when deposited in the United States mail, as first class, certified or registered mail postage prepaid, directed to the addresses shown near the beginning of this Agreement. Any party may change its address for notices under this Agreement by giving formal written notice to the other parties, specifying that the purpose of the notice is to change the party's address. For notice purposes, Indemnitor agrees to keep Lender informed at all times of Indemnitor's current address. Subject to applicable law, and except for notice required or allowed by law to be given in another manner, if there is more than one Indemnitor, any notice given by Lender to any Indemnitor is deemed to be notice given to all Indemnitors.

**Severability.** If a court of competent jurisdiction finds any provision of this Agreement to be illegal, invalid, or unenforceable as to any circumstance, that finding shall not make the offending provision illegal, invalid, or unenforceable as to any other circumstance. If feasible, the offending provision shall be considered modified so that it becomes legal, valid and enforceable. If the offending provision cannot be so modified, it shall be considered deleted from this Agreement. Unless otherwise required by law, the illegality, invalidity, or unenforceability of any provision of this Agreement shall not affect the legality, validity or enforceability of any other provision of this Agreement.

**Successors and Assigns.** Subject to any limitations stated in this Agreement on transfer of Indemnitor's interest, this Agreement shall be binding upon and inure to the benefit of the parties, their successors and assigns. If ownership of the Property becomes vested in a person other than Indemnitor, Lender, without notice to Indemnitor, may deal with Indemnitor's successors with reference to this Agreement and the Indebtedness by way of forbearance or extension without releasing Indemnitor from the obligations of this Agreement or liability under the Indebtedness.

**Time is of the Essence.** Time is of the essence in the performance of this Agreement.

**Waive Jury.** All parties to this Agreement hereby waive the right to any jury trial in any action, proceeding, or counterclaim brought by any party against any other party.

**DEFINITIONS.** The following capitalized words and terms shall have the following meanings when used in this Agreement. Unless specifically stated to the contrary, all references to dollar amounts shall mean amounts in lawful money of the United States of America. Words and terms used in the singular shall include the plural, and the plural shall include the singular, as the context may require. Words and terms not otherwise defined in this Agreement shall have the meanings attributed to such terms in the Uniform Commercial Code:

**Agreement.** The word "Agreement" means this Hazardous Substances Agreement, as this Hazardous Substances Agreement may be amended or modified from time to time, together with all exhibits and schedules attached to this Hazardous Substances Agreement from time to time.

**Environmental Laws.** The words "Environmental Laws" mean any and all state, federal and local statutes, regulations and ordinances relating to the protection of human health or the environment, including without limitation the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, as amended, 42 U.S.C. Section 9601, et seq. ("CERCLA"), the Superfund Amendments and Reauthorization Act of 1986, Pub. L. No. 99-499 ("SARA"), the Hazardous Materials Transportation Act, 49 U.S.C. Section 1801, et seq., the Resource Conservation and Recovery Act, 42 U.S.C. Section 6901, et seq., or other applicable state or federal laws, rules, or regulations adopted pursuant thereto.

**Hazardous Substances.** The words "Hazardous Substances" mean materials that, because of their quantity, concentration or physical, chemical or infectious characteristics, may cause or pose a present or potential hazard to human health or the environment when improperly used, treated, stored, disposed of, generated, manufactured, transported or otherwise handled. The words "Hazardous Substances" are used in their very broadest sense and include without limitation any and all hazardous or toxic substances, materials or waste as defined by or listed under the Environmental Laws. The term "Hazardous Substances" also includes, without limitation, petroleum and petroleum by-products or any fraction thereof and asbestos.

**Indebtedness.** The word "Indebtedness" means all principal, interest, and other amounts, costs and expenses payable under the Note or Related Documents, together with all renewals of, extensions of, modifications of, consolidations of and substitutions for the Note or Related Documents and any amounts expended or advanced by Lender to discharge Indemnitor's obligations or expenses incurred by Lender to enforce Indemnitor's obligations under this Agreement, together with interest on such amounts as provided in this Agreement.

**Lender.** The word "Lender" means East West Bank, its successors and assigns.

**Note.** The word "Note" means the Note dated August 18, 2014 and executed by Winson at Federal Way LLC in the principal amount of \$7,700,000.00, together with all renewals of, extensions of, modifications of, refinancings of, consolidations of, and substitutions for the note or credit agreement.

**Occupant.** The word "Occupant" means individually and collectively all persons or entities occupying or utilizing the Property, whether as owner, tenant, operator or other occupant.

**HAZARDOUS SUBSTANCES AGREEMENT  
(Continued)**

Loan No: 582921

Page 6

**Property.** The word "Property" means all of Indemnitor's right, title and interest in and to all the Property as described in the "Property Description" section of this Agreement.

**Real Property.** The words "Real Property" mean the real property, interests and rights, as further described in this Agreement.

**Related Documents.** The words "Related Documents" mean all promissory notes, credit agreements, loan agreements, environmental agreements, guaranties, security agreements, mortgages, deeds of trust, security deeds, collateral mortgages, and all other instruments, agreements and documents, whether now or hereafter existing, executed in connection with the indebtedness.

**EACH PARTY TO THIS AGREEMENT ACKNOWLEDGES HAVING READ ALL THE PROVISIONS OF THIS AGREEMENT, AND EACH AGREES TO ITS TERMS. NO FORMAL ACCEPTANCE BY LENDER IS NECESSARY TO MAKE THIS AGREEMENT EFFECTIVE. THIS AGREEMENT IS DATED AUGUST 18, 2014.**

**BORROWER:**

WINSON AT FEDERAL WAY LLC

By: [Signature]  
Wei Zhang, Member/Manager of Winson at Federal Way LLC

By: [Signature]  
Jenny Shin, Manager of Winson at Federal Way LLC

**LENDER:**

EAST WEST BANK

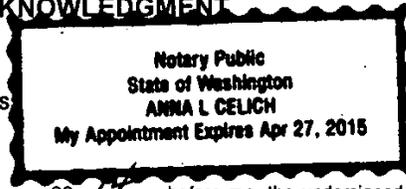
X [Signature]  
Authorized Signer

**LIMITED LIABILITY COMPANY ACKNOWLEDGMENT**

STATE OF Washington

COUNTY OF King

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On this 21st day of August, 2014, before me, the undersigned Notary Public, personally appeared Wei Zhang, Member/Manager of Winson at Federal Way LLC, and personally known to me or proved to me on the basis of satisfactory evidence to be a member or designated agent of the limited liability company that executed the Hazardous Substances Agreement and acknowledged the Agreement to be the free and voluntary act and deed of the limited liability company, by authority of statute, its articles of organization or its operating agreement, for the uses and purposes therein mentioned, and on oath stated that he or she is authorized to execute this Agreement and in fact executed the Agreement on behalf of the limited liability company.

By: [Signature]  
Notary Public in and for the State of Wa

Residing at Seattle  
My commission expires 4/27/15

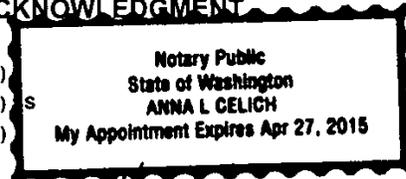
HAZARDOUS SUBSTANCES AGREEMENT  
(Continued)

Loan No: 582921

Page 7

LIMITED LIABILITY COMPANY ACKNOWLEDGMENT

STATE OF Washington  
COUNTY OF King



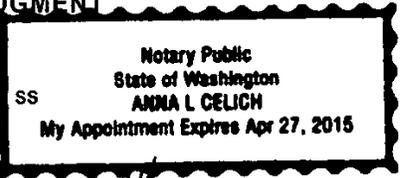
On this 21st day of August, 2014, before me, the undersigned Notary Public, personally appeared Jenny Shih, Manager of Winson at Federal Way LLC, and personally known to me or proved to me on the basis of satisfactory evidence to be a member or designated agent of the limited liability company that executed the Hazardous Substances Agreement and acknowledged the Agreement to be the free and voluntary act and deed of the limited liability company, by authority of statute, its articles of organization or its operating agreement, for the uses and purposes therein mentioned, and on oath stated that he or she is authorized to execute this Agreement and in fact executed the Agreement on behalf of the limited liability company.

By Anna L Celich  
Notary Public in and for the State of wa

Residing at Seattle  
My commission expires 4/27/15

LENDER ACKNOWLEDGMENT

STATE OF Washington  
COUNTY OF King



On this 21st day of August, 2014, before me, the undersigned Notary Public, personally appeared Sheng-ta Tsai and personally known to me or proved to me on the basis of satisfactory evidence to be the authorized agent for East West Bank that executed the within and foregoing instrument and acknowledged said instrument to be the free and voluntary act and deed of East West Bank, duly authorized by East West Bank through its board of directors or otherwise, for the uses and purposes therein mentioned, and on oath stated that he or she is authorized to execute this said instrument and in fact executed this said instrument on behalf of East West Bank.

By Anna L Celich  
Notary Public in and for the State of wa

Residing at Seattle  
My commission expires 4/27/15

**Electronically Recorded**  
**20140919001069**

SIMPLIFILE SUBL 81.00  
Page 001 of 010  
09/19/2014 03:27  
King County, WA

**WHEN RECORDED RETURN TO:**

East West Bank  
9300 Flair Drive 6<sup>th</sup> Floor  
El Monte, CA 91731  
Attn: Loan Servicing

**DOCUMENT TITLE(S)**

**Subordination Agreement and Agreement of Non-Disturbance and Attornment**

**REFERENCE NUMBER(S) OF DOCUMENTS ASSIGNED OR RELEASED:**

**GRANTOR(S):**

EVERGREEN STATE RESTAURANT LP NO.4 dba  
OUTBACK STEAKHOUSE (TENANT)  
WINSON AT FEDERAL WAY LLC (owner)

**GRANTEE(S):**

EAST WEST BANK

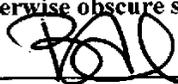
**ABBREVIATED LEGAL DESCRIPTION:**

LOTS 1 AND 6 AND TRACT A OF AMENDMENT TO EVERGREEN PLAZA BINDING SITE PLAN / PUD,  
RECORDED SEPTEMBER 9, 2003 UNDER RECORDING NO. 20030909000708 IN VOLUME 216, PAGES 36 TO  
38, IN KING COUNTY, WASHINGTON;  
EXCEPTING THEREFROM THAT PORTION CONVEYED TO THE CITY OF FEDERAL WAY BY DEED  
RECORDED UNDER KING COUNTY RECORDING NO. 20050524000385.  
SITUATE IN THE CITY OF FEDERAL WAY, COUNTY OF KING, STATE OF WASHINGTON.

**TAX PARCEL NUMBER(S):**

To King County:

I am requesting an emergency nonstandard recording for an additional fee as provided in  
RCW 36.18.010. I understand that the recording processing requirements may cover up or  
otherwise obscure some part of the text of the original document.



Briana Everroad

Recorded at the request of  
FIDELITY NATIONAL TITLE  
MAJOR ACCOUNTS

Order # 20369453 @ 81

RECORDING REQUESTED BY & )  
WHEN RECORDED RETURN TO: )  
 )  
 East West Bank )  
 9300 Flair Drive, 6<sup>th</sup> Floor )  
 El Monte, CA 91731 )  
 Attn: Loan Servicing )  
 )

(Space Above This Line For Recorder's Use)

**SUBORDINATION AGREEMENT AND  
 AGREEMENT OF NON-DISTURBANCE AND ATTORNMENT**

(EWB Form – Rev. 5-2013)

This Subordination Agreement and Agreement of Non-Disturbance and Attornment ("Agreement") is made and entered into as of this 18<sup>th</sup> day of August, 2014, among (i) East West Bank ("Lender"), (ii) Evergreen State Restaurant Limited Partnership No. 4 d.b.a. Outback Steakhouse ("Tenant") and (iii) Winson at Federal Way LLC, a Washington limited liability company ("Owner"), with reference to the following:

**RECITALS**

A. Lender has made or is proposing to make a loan (the "Loan") to Owner secured or to be secured by a deed of trust (the "Deed of Trust") on the real property legally described in Exhibit A attached hereto and the improvements thereon (together, the "Property"). The Deed of Trust and any and all other documents evidencing or relating to the Loan shall be referred to as the "Loan Documents".

B. Tenant has leased or is proposing to lease certain space in the Property (the "Premises") (the lease and all amendments thereto being referred to as the "Lease").

C. Lender and Tenant desire to enter into this Agreement under which Tenant subordinates the Lease and its interest in the Property and agrees to attorn to Lender and under which Lender agrees to not disturb Tenant's possession of the portion of the Property covered by the Lease (the "Premises") all to the extent set forth herein, and so long as Tenant is not in default under the Lease.

NOW THEREFORE, with reference to the foregoing recitals and for good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, the parties to this Agreement agree as follows:

1. Subordination. The Lease, and the rights, if any, of Tenant in, to and under the Lease and the Premises, are hereby subjected and subordinated to the lien of the Deed of Trust, it being understood and agreed that the foregoing subordination shall apply to any and all increases, renewals, modifications, extensions, substitutions, replacements and/or consolidations of the Deed of Trust, provided that any and all such increases, renewals, modifications, extensions, substitutions, replacements and/or consolidations shall nevertheless be subject to the terms of this Agreement.

2. Tenant Not to Be Disturbed. So long as Tenant is not in default in the payment of rent or of any of the terms, covenants or conditions of the Lease on Tenant's part to be performed (beyond any period given Tenant in the Lease to cure such default) and Tenant attorns to Lender as provided herein, (a) Tenant's possession of the Premises shall not be diminished or interfered with by Lender, and (b)

Lender will not join Tenant as a party defendant in any action or proceeding foreclosing the Deed of Trust unless such joinder is necessary to foreclose the Deed of Trust and then only for such purpose and not for the purpose of terminating the Lease.

3. Tenant to Attorn To Lender. If Lender shall become the owner of the Premises or the Premises shall be sold by reason of foreclosure or other proceedings brought to enforce the Deed of Trust or the Premises shall be transferred by deed in lieu of foreclosure, the Lease shall continue in full force and effect as a direct Lease between the then owner of the Premises, who shall succeed to the rights and duties of the Owner under the Lease. Tenant shall attorn to Lender or any other such owner as its landlord, said attornment to be effective and self-operative without the execution of any further instruments. Tenant hereby waives the provisions of any statute or rule of law, now or hereafter in effect, which may give or purport to give Tenant any right or election to terminate or otherwise adversely affect the Lease and the obligations of Tenant thereunder as a result of any such foreclosure or deed-in-lieu of foreclosure.

4. Notice of Default: Rent Payments to Lender. In the event that Lender notifies Tenant of a default under the Deed of Trust and requests Tenant to pay its rent and all other sums due under the Lease to Lender, Tenant shall pay such sums directly to Lender, or as Lender may otherwise request, without any further consent of Owner.

5. Limitations. Lender (and any successor or assignee of Lender) shall not be (i) liable for any act or omission of Owner or any predecessor-in-interest, (ii) subject to any offsets, counterclaims or defenses which Tenant may have against Owner or any predecessor-in-interest, (iii) liable for any security deposit or payment of rent (for more than one month in advance of the date due under the Lease) made by Tenant to Owner or any predecessor-in-interest, except to the extent actually received by Lender, (iv) liable for any construction, repair allowances or other allowances or payments to be made by Owner under the Lease or (v) obligated to expand the Premises, construct additional improvements or otherwise expend funds which are capital in nature except for items of ordinary maintenance and repair for the Premises or the property in which it is located. Notwithstanding any term of the Lease, upon foreclosure of the Deed of Trust, or acceptance of a deed in lieu thereof or other similar transfer, any environmental/hazardous materials indemnity and/or reimbursement provisions under the Lease shall not be applicable to, or enforceable against, Lender, any successor in interest to or assignee of Lender and/or any purchaser at foreclosure and any transferee thereof. If Lender becomes the owner of the Property or the Property is sold to a third party by reason of foreclosure or other proceedings brought to enforce the Deed of Trust or the Property is conveyed by deed-in-lieu of foreclosure, Tenant agrees that, notwithstanding anything to the contrary contained in the Lease, after such foreclosure sale or conveyance by deed-in-lieu of foreclosure, Lender has no personal liability to Tenant under the Lease and Tenant shall look solely to Owner for satisfaction of any of its remedies for collection of a judgment or other judicial process requiring payment of money. Further, in the event Lender transfers its interest in this Lease to a third party, Lender shall be automatically freed and released, from and after the date of such transfer or conveyance, of all liability for the performance of any covenants and agreements which accrue after the date of such transfer of Lender's interest.

6. Modification: Notice and Cure Rights. The Lease shall not be amended, modified or supplemented, nor will the lease be terminated (except as set forth in the Lease after a default and after the notice and cure rights set forth below) or any party having liability under the Lease be released by the other, without the prior written consent of Lender. Tenant shall not terminate or seek to terminate the Lease until Tenant has given written notice, by registered or certified mail, return receipt requested, of said act or omission to Lender, which notice shall be addressed to East West Bank, 9300 Flair Drive, 6<sup>th</sup> Floor, El Monte, CA 91731; and until a period of time equal to the greater of: (a) the time allowed Owner under the Lease or (b) thirty days following such notice has elapsed, during which period Lender has the right, but not the obligation, to remedy such act, omission or other matter. If possession by Lender of the Property is necessary to effect such remedy and would be commercially reasonable, then the period of

time for remedying such act or omission shall include a reasonable period of time for Lender to gain possession of the Premises, whether by foreclosure or otherwise.

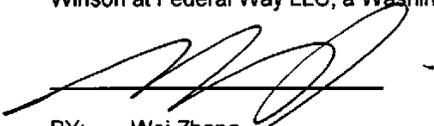
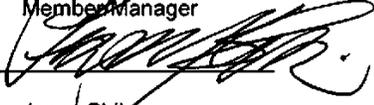
7. **Tenant Representations and Warranties.** Tenant hereby represents and warrants that (a) the Lease is solely and exclusively for the Premises and/or the Property identified in Exhibit "A" attached to this Agreement, (b) the Lease is not a "master lease" for any other premises and/or property leased by Tenant and/or Owner, (c) any default under the Lease, and the exercise of Owner's rights and remedies in connection with such default, shall only impact and/or effect Tenant's obligations with respect to the Premises and/or the Property, and (d) any default by Tenant under any other lease with Owner or any other landlord, and the exercise of any such landlord's rights and remedies in connection with such default, shall not affect Tenant's obligations under the Lease.

8. **Miscellaneous.** This Agreement and each and every covenant, agreement and other provision hereof shall be binding upon and shall inure to the benefit of the parties hereto and their representatives, successors and assigns. This Agreement may not be modified orally or in any manner other than by an agreement in writing signed by the parties hereto or their respective successors in interest. The term "Lender" as used throughout this Agreement includes any successor or assign of Lender and any holder(s) of any interest in the indebtedness secured by the Deed of Trust. This Agreement and the rights and duties of the parties hereunder shall be governed for all purposes by the law of the State of California and the law of the United States applicable to transactions within such state. This Agreement may be executed in multiple counterparts, and by the different parties hereto in separate counterparts, each of which when so executed and delivered shall be deemed to be one and the same instrument with the same signature as if all parties to this Agreement had signed the same signature page.

IN WITNESS WHEREOF, the parties hereto have each caused this Agreement to be executed as of the date first above written.

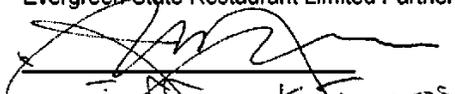
**Owner:**

Winson at Federal Way LLC, a Washington limited liability company

  
BY: Wei Zhang  
Title: Member Manager  
  
BY: Jenny Shih  
Title: Manager

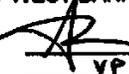
**Tenant:**

Evergreen State Restaurant Limited Partnership No. 4 d.b.a. Outback Steakhouse

  
BY: Jeffrey K. Jones  
Title: President & CEO

Lender:

EAST WEST BANK

BY:  SHENG-TA TSAI  
Title: VP / PORTFOLIO MANAGER

(ALL SIGNATURES MUST BE ACKNOWLEDGED)

**EXHIBIT A  
LEGAL DESCRIPTION**

CERTIFICATE OF ACKNOWLEDGEMENT

State of WASHINGTON

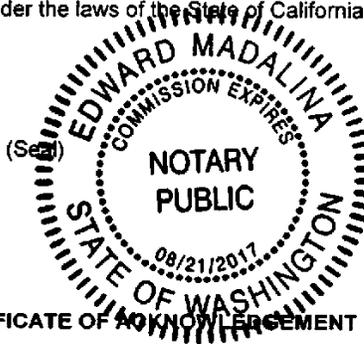
County of KING

On 8/21/14 before me, EDWARD MADALINA, a notary public, personally appeared JEFFREY EARL JONES, who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing is true and correct.

WITNESS my hand and official seal.

  
Signature  
Notary Public



CERTIFICATE OF ACKNOWLEDGEMENT

State of WA

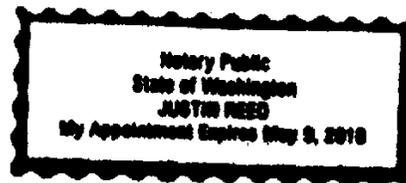
County of King

On 4/4/2014 before me, Justin Read, a notary public, personally appeared Wei Zhang, who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing is true and correct.

WITNESS my hand and official seal.

  
Signature  
Notary Public (Seal)



**CERTIFICATE OF ACKNOWLEDGEMENT**

State of WA

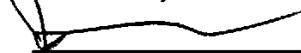
County of King

On 9/4/2014 before me, Justin Read, a notary public,  
personally appeared Jenny Shih

\_\_\_\_\_, who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing is true and correct.

WITNESS my hand and official seal.

  
\_\_\_\_\_  
Signature  
Notary Public

(Seal)



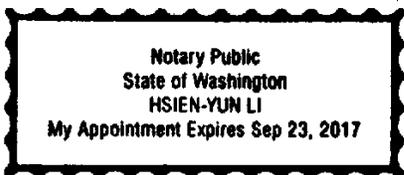
**WASHINGTON SHORT-FORM INDIVIDUAL ACKNOWLEDGMENT**  
**(RCW 42.44.100)**

State of Washington }  
County of King } ss.

I certify that I know or have satisfactory evidence that Sheng-Ta Tsai  
Name of Signer

is the person who appeared before me, and said person acknowledged that he/she signed this instrument and acknowledged it to be his/her free and voluntary act for the uses and purposes mentioned in the instrument.

Dated: 09/17/14  
Month/Day/Year



[Signature]  
Signature of Notarizing Officer

Notary Public  
Title (Such as "Notary Public")

Place Notary Seal and/or Stamp Above

My appointment expires: 09/23/2017

**OPTIONAL**

*Though this section is optional, completing this information can deter alteration of the document or fraudulent reattachment of this form to an unintended document.*

**Description of Attached Document**

Title or Type of Document: SNDA

Document Date: \_\_\_\_\_ Number of Pages: 7

Signer(s) Other Than Named Above: \_\_\_\_\_

**EXHIBIT A**  
**LEGAL DESCRIPTION**

**LOTS 1 AND 6 AND TRACT A OF AMENDMENT TO EVERGREEN PLAZA BINDING SITE PLAN / PUD, RECORDED SEPTEMBER 9, 2003 UNDER RECORDING NO. 20030909000708 IN VOLUME 216, PAGES 36 TO 38, IN KING COUNTY, WASHINGTON;**

**EXCEPTING THEREFROM THAT PORTION CONVEYED TO THE CITY OF FEDERAL WAY BY DEED RECORDED UNDER KING COUNTY RECORDING NO. 20050524000385.**

**SITUATE IN THE CITY OF FEDERAL WAY, COUNTY OF KING, STATE OF WASHINGTON.**

# AMENDMENT TO EVERGREEN PLAZA BINDING SITE PLAN/ PUD

THAT PORTION OF THE SE1/4 OF THE SW 1/4  
OF SECTION 9, TOWNSHIP 21 NORTH, RANGE 4 EAST, W.M.  
CITY OF FEDERAL WAY, WASHINGTON

## DEDICATION

WE, THE UNDERSIGNED OWNERS OF THE HEREIN DESCRIBED PROPERTIES, MAKE A SUBDIVISION GRAPHICALLY REPRESENTED BY ATTACHED BINDING SITE PLAN.

D. Michael Dunne  
BY: BSP LOT # 1, 5 AND 6  
Richard Day  
BY: BSP LOT # 2  
Summy Coleman  
BY: BSP LOT # 3

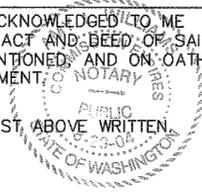
Mouir H. Touh  
BY: BSP LOT # 7  
KERRI B. ANDERSON  
BY: BSP LOT # 7  
Executive Vice President &  
Chief Financial Officer  
LAW DEPT. WWS

## ACKNOWLEDGMENTS

STATE OF WASHINGTON )  
COUNTY OF KING )

THIS IS TO CERTIFY THAT ON THIS 12<sup>th</sup> DAY OF March, 2003 BEFORE ME, THE UNDERSIGNED, A NOTARY PUBLIC, PERSONALLY APPEARED D. Michael Dunne Managing partner OF DCATE LLC THAT EXECUTED THE FOREGOING DEDICATION, AND WHO ACKNOWLEDGED TO ME THE SAID INSTRUMENT TO BE THE FREE AND VOLUNTARY ACT AND DEED OF SAID ASSOCIATION, FOR THE USES AND PURPOSES THEREIN MENTIONED, AND ON OATH STATED THAT HE WAS AUTHORIZED TO EXECUTE THE SAID INSTRUMENT.

WITNESS MY HAND OFFICIAL SEAL THE DAY AND YEAR FIRST ABOVE WRITTEN.  
Amy L. Williams  
NOTARY PUBLIC IN AND FOR THE STATE OF WASHINGTON, RESIDING AT Kent 98032



STATE OF Ohio )  
COUNTY OF Franklin )

THIS IS TO CERTIFY THAT ON THIS 28<sup>th</sup> DAY OF March, 2003, BEFORE ME, THE UNDERSIGNED, A NOTARY PUBLIC, PERSONALLY APPEARED Kerri B. Anderson Executive Vice President + CFO OF Wendy's International, Inc THAT EXECUTED THE FOREGOING DEDICATION, AND WHO ACKNOWLEDGED TO ME THE SAID INSTRUMENT TO BE THE FREE AND VOLUNTARY ACT AND DEED OF SAID ASSOCIATION, FOR THE USES AND PURPOSES THEREIN MENTIONED, AND ON OATH STATED THAT HE WAS AUTHORIZED TO EXECUTE THE SAID INSTRUMENT.

WITNESS MY HAND OFFICIAL SEAL THE DAY AND YEAR FIRST ABOVE WRITTEN.

Darcy B. Mihal  
NOTARY PUBLIC IN AND FOR THE STATE OF Ohio RESIDING AT 5346 Dale Dr Columbus, OH 43220



STATE OF South Carolina )  
COUNTY OF SPARTANBURG )

THIS IS TO CERTIFY THAT ON THIS 23<sup>rd</sup> DAY OF July, 2003 BEFORE ME, THE UNDERSIGNED, A NOTARY PUBLIC, PERSONALLY APPEARED Mounir N. Sawda Vice President OF Jenny's Beauty Inc THAT EXECUTED THE FOREGOING DEDICATION, AND WHO ACKNOWLEDGED TO ME THE SAID INSTRUMENT TO BE THE FREE AND VOLUNTARY ACT AND DEED OF SAID ASSOCIATION, FOR THE USES AND PURPOSES THEREIN MENTIONED, AND ON OATH STATED THAT HE WAS AUTHORIZED TO EXECUTE THE SAID INSTRUMENT.

WITNESS MY HAND OFFICIAL SEAL THE DAY AND YEAR FIRST ABOVE WRITTEN.

Timothy E. Flemming  
TIMOTHY E. FLEMMING  
NOTARY PUBLIC  
NOTARY PUBLIC IN AND FOR THE STATE OF South Carolina RESIDING AT 100 Dog Hill Road Anderson, SC 29356  
MY COMMISSION EXPIRES APRIL 22, 2004



STATE OF Wash )  
COUNTY OF King )

THIS IS TO CERTIFY THAT ON THIS 30<sup>th</sup> DAY OF July, 2003 BEFORE ME, THE UNDERSIGNED, A NOTARY PUBLIC, PERSONALLY APPEARED Richard Day OF Wash Federal Realty THAT EXECUTED THE FOREGOING DEDICATION, AND WHO ACKNOWLEDGED TO ME THE SAID INSTRUMENT TO BE THE FREE AND VOLUNTARY ACT AND DEED OF SAID ASSOCIATION, FOR THE USES AND PURPOSES THEREIN MENTIONED, AND ON OATH STATED THAT HE WAS AUTHORIZED TO EXECUTE THE SAID INSTRUMENT.

WITNESS MY HAND OFFICIAL SEAL THE DAY AND YEAR FIRST ABOVE WRITTEN.

Ma Bazi  
NOTARY PUBLIC IN AND FOR THE STATE OF WA RESIDING AT Maple



STATE OF Wash )  
COUNTY OF King )

THIS IS TO CERTIFY THAT ON THIS 31<sup>st</sup> DAY OF July, 2003, BEFORE ME, THE UNDERSIGNED, A NOTARY PUBLIC, PERSONALLY APPEARED Bradley Lindsay OF Arco THAT EXECUTED THE FOREGOING DEDICATION, AND WHO ACKNOWLEDGED TO ME THE SAID INSTRUMENT TO BE THE FREE AND VOLUNTARY ACT AND DEED OF SAID ASSOCIATION, FOR THE USES AND PURPOSES THEREIN MENTIONED, AND ON OATH STATED THAT HE WAS AUTHORIZED TO EXECUTE THE SAID INSTRUMENT.

WITNESS MY HAND OFFICIAL SEAL THE DAY AND YEAR FIRST ABOVE WRITTEN.

Amy L. Williams  
NOTARY PUBLIC IN AND FOR THE STATE OF WA RESIDING AT Kent, 98032



## ACCESS NOTES

NO DIRECT VEHICULAR ACCESS FROM SOUTH 320TH STREET TO LOTS 2, 3 AND 4 OR FROM LOTS 2 TO SOUTH 320TH STREET IS ALLOWED. VEHICULAR MOVEMENTS BETWEEN TRACT B AND SOUTH 320TH STREET ARE SUBJECT TO THE FOLLOWING RESTRICTIONS:

- 1. BETWEEN LOTS 2 AND 3 RIGHT IN ONLY
- 2. BETWEEN LOTS 3 AND 4 RIGHT OUT ONLY.
- 3. WEST OF LOTS 4 RIGHT IN, LEFT IN AND RIGHT OUT.

## SPECIAL NOTES

THE AMENDMENT TO THE "EVERGREEN PLAZA BINDING SITE PLAN/PUD" IS PREPARED TO ALTER THE LANGUAGE OF THE UNDERLYING "EVERGREEN PLAZA PUD" AND ELIMINATE THE DRAINAGE TRACT LIMITATION FROM THE FACE OF THE PLAT.

ZONING/COMPREHENSIVE PLAN - CITY CENTER CORE (ZONE =CC-C)

# AMENDMENT TO EVERGREEN PLAZA BINDING SITE PLAN/ PUD

THAT PORTION OF THE SE1/4 OF THE SW 1/4  
OF SECTION 9, TOWNSHIP 21 NORTH, RANGE 4 EAST, W.M.  
CITY OF FEDERAL WAY, WASHINGTON

### APPROVALS

#### CITY OF FEDERAL WAY

Examined and approved this 29<sup>th</sup> day of August, 2003

Ken Miller (for)  
DIRECTOR OF PUBLIC WORKS

Examined and approved this 29<sup>th</sup> day of AUGUST, 2003

My Kim for KATHY M. SCHUG  
DIRECTOR OF COMMUNITY DEVELOPMENT

#### KING COUNTY DEPARTMENT OF ASSESSMENTS

Examined and approved this 3<sup>rd</sup> day of September, 2003

Scott Noble  
ASSESSOR  
Russell Scheidelman  
DEPUTY ASSESSOR

### RECORDING CERTIFICATE

FILED FOR RECORD AT THE REQUEST OF THE FEDERAL WAY CITY COUNCIL THIS 9<sup>th</sup>  
DAY OF Sept A.D. 2003 AT 10 MINUTES PAST 10:00 AM, AND RECORDED  
IN VOLUME 216 OF PLATS, PAGE 36-38, RECORDS OF KING COUNTY.

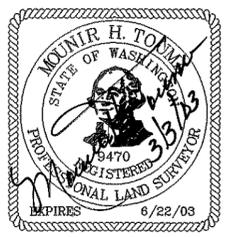
KING COUNTY, WASHINGTON  
DIVISION OF RECORDS AND ELECTIONS

Dean Logan MANAGER      Walt Washington SUPERINTENDENT OF RECORDS

### SURVEYOR'S CERTIFICATE

I HEREBY CERTIFY THAT THIS BINDING SITE PLAN IS BASED UPON AN ACTUAL SURVEY AND  
SUBDIVISION OF SECTION 9, TOWNSHIP 21 NORTH, RANGE 4E, W.M., THAT THE COURSES  
AND DISTANCES ARE SHOWN CORRECTLY THEREON; I HAVE COMPLIED WITH ALL STATE  
COUNTRY AND CITY REGULATIONS GOVERNING PLATTING

Moumir H. Touma  
MOUHIR H. TOUMA PLS.  
PROFESSIONAL LAND SURVEYOR  
CERTIFICATE NO 9470



### LEGAL DESCRIPTION

#### PARCEL A

TRACTS B, C AND LOT 1, EVERGREEN PLAZA, ACCORDING TO THE PLAT THEREOF,  
RECORDED IN VOLUME 100 OF PLATS, PAGE 74, IN KING COUNTY, WASHINGTON;

TOGETHER WITH LOT 2 OF CITY OF FEDERAL WAY BOUNDARY LINE ADJUSTMENT  
NUMBER BLA 00-104493, RECORDED UNDER RECORDING NUMBER 20010215900003;  
EXCEPT THAT PORTION CONVEYED TO THE CITY OF FEDERAL WAY BY DEED RECORDED  
UNDER RECORDING NUMBER 200007211001417.

#### PARCEL B

LOT 1 OF CITY OF FEDERAL WAY BOUNDARY LINE ADJUSTMENT NUMBER BLA  
00-104493, RECORDED UNDER RECORDING NUMBER 2001021500003.

#### PARCEL C

LOT 2, EVERGREEN PLAZA, ACCORDING TO THE PLAT THEREOF, RECORDED IN VOLUME  
100 OF PLATS, PAGE 74, IN KING COUNTY, WASHINGTON;

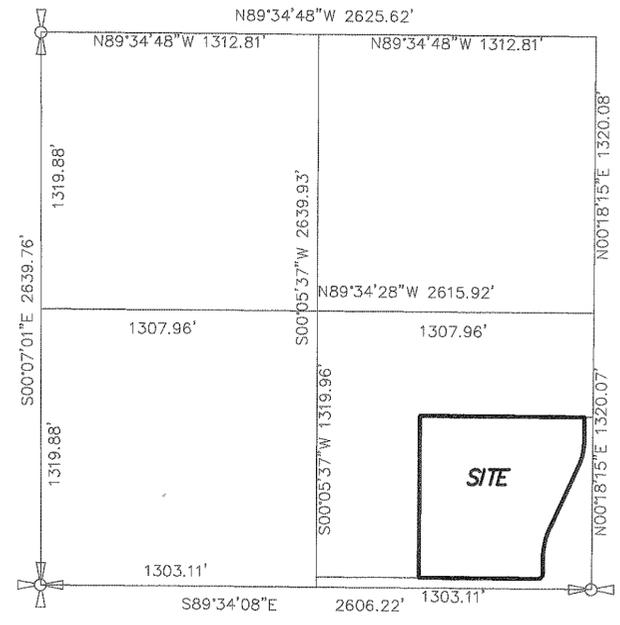
EXCEPT THAT PORTION CONVEYED TO THE CITY OF FEDERAL WAY BY DEED RECORDED  
UNDER RECORDING NUMBER 20000803000870.

#### PARCEL D

LOT 3, EVERGREEN PLAZA, ACCORDING TO THE PLAT THEREOF, RECORDED IN VOLUME  
100 OF PLATS, PAGE 74, IN KING COUNTY, WASHINGTON.

#### PARCEL E

LOT 4, EVERGREEN PLAZA, ACCORDING TO THE PLAT THEREOF, RECORDED IN VOLUME  
100 OF PLATS, PAGE 74, IN KING COUNTY, WASHINGTON.



DEVELOPER:  
DCG II, LLC  
10818 SE KENT-KANGLEY RD, SUITE 104  
KENT, WA. 98031

OWNERS:  
DCG II, LLC  
10818 SE KENT-KANGLEY RD  
SUITE 104  
KENT, WA 98031  
PHONE 253-852-6400

Denny's, Inc.  
3345 Michaelson Drive  
Suite 200  
Irvine, CA 92715

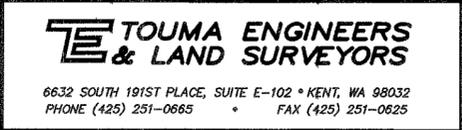
Wendy's International, Inc.  
4288 W. Dublin Granville Road  
Dublin, Ohio 43017

Washington Federal Savings and Loan  
1119 Pacific Avenue, M.S. 0291  
Tacoma, WA 98402

ARG Enterprises, Inc.  
4410 El Camino Real  
Suite 201  
Los Altos, CA 94022

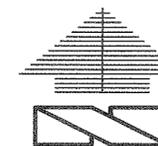
#### SURVEYOR:

TOUMA ENGINEERS/LAND SURVEYORS  
6632 SOUTH 191ST PLACE  
SUITE E102  
KENT, WA 98032  
PHONE 425-251-0665



# AMENDMENT TO EVERGREEN PLAZA BINDING SITE PLAN/ PUD

THAT PORTION OF THE SE1/4 OF THE SW 1/4  
OF SECTION 9, TOWNSHIP 21 NORTH, RANGE 4 EAST, W.M.  
CITY OF FEDERAL WAY, WASHINGTON



GRAPHIC SCALE



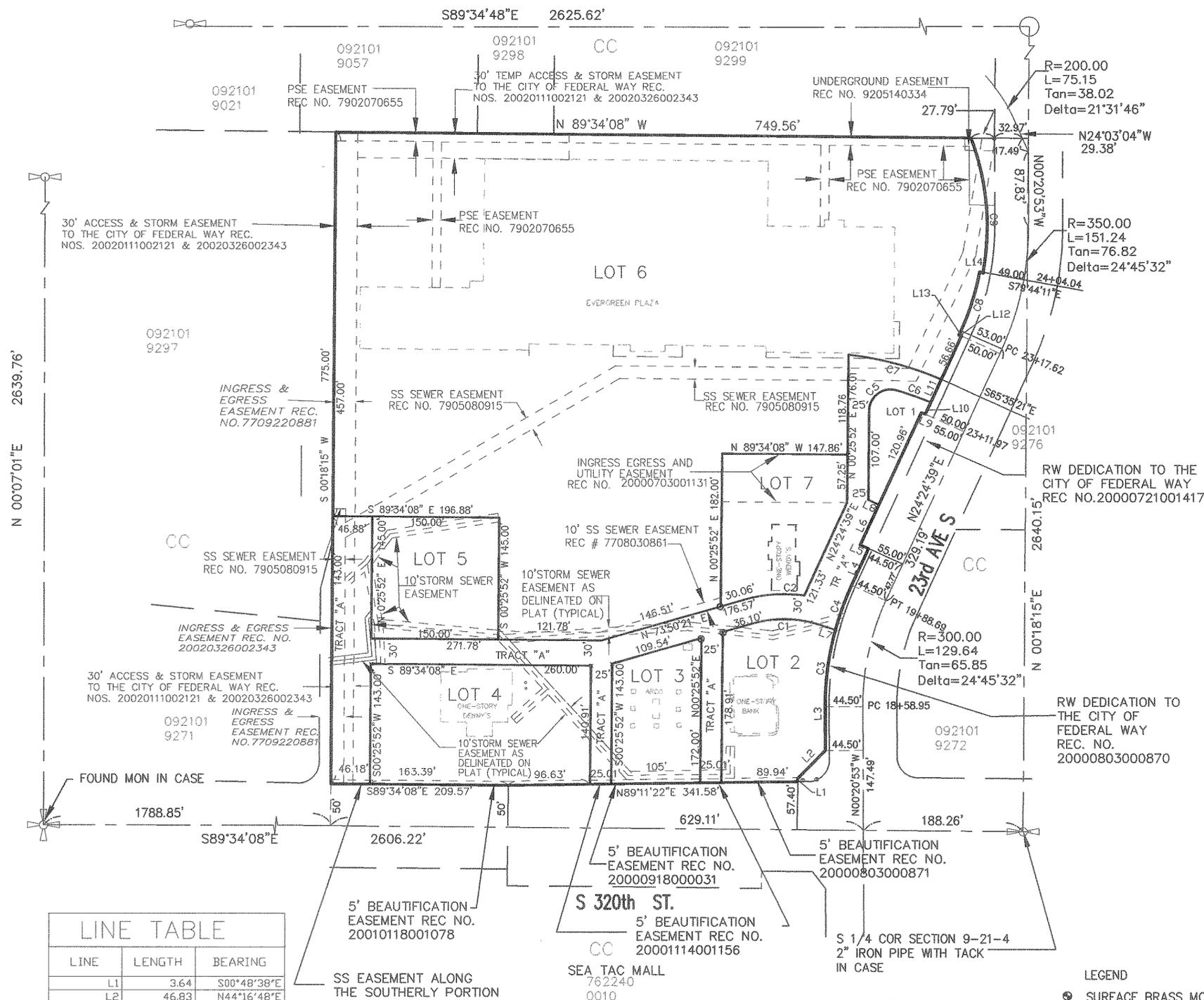
( IN FEET )  
1 inch = 100 ft.

## SURVEY NOTES

INSTRUMENT: NIKON TOTAL STATION DTM-A10LG  
(5 SECOND INSTRUMENT).  
METHOD USED: FIELD TRAVERSE WITH ACTUAL  
FIELD MEASUREMENTS AND ANGLES  
WAC 332-130-090  
DATE OF SURVEY: JUNE 2001  
BASIS OF BEARING: THE PLAT OF EVERGREEN PLAZA VOL. 100,  
PAGE 74, RECORDS OF KING CO.

## NOTES

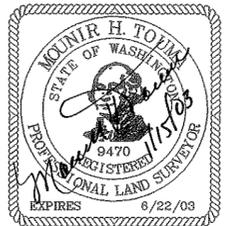
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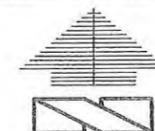
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DATE: FEBRUARY 1, 2003  
CITY FILE NO. 02-102953-SU

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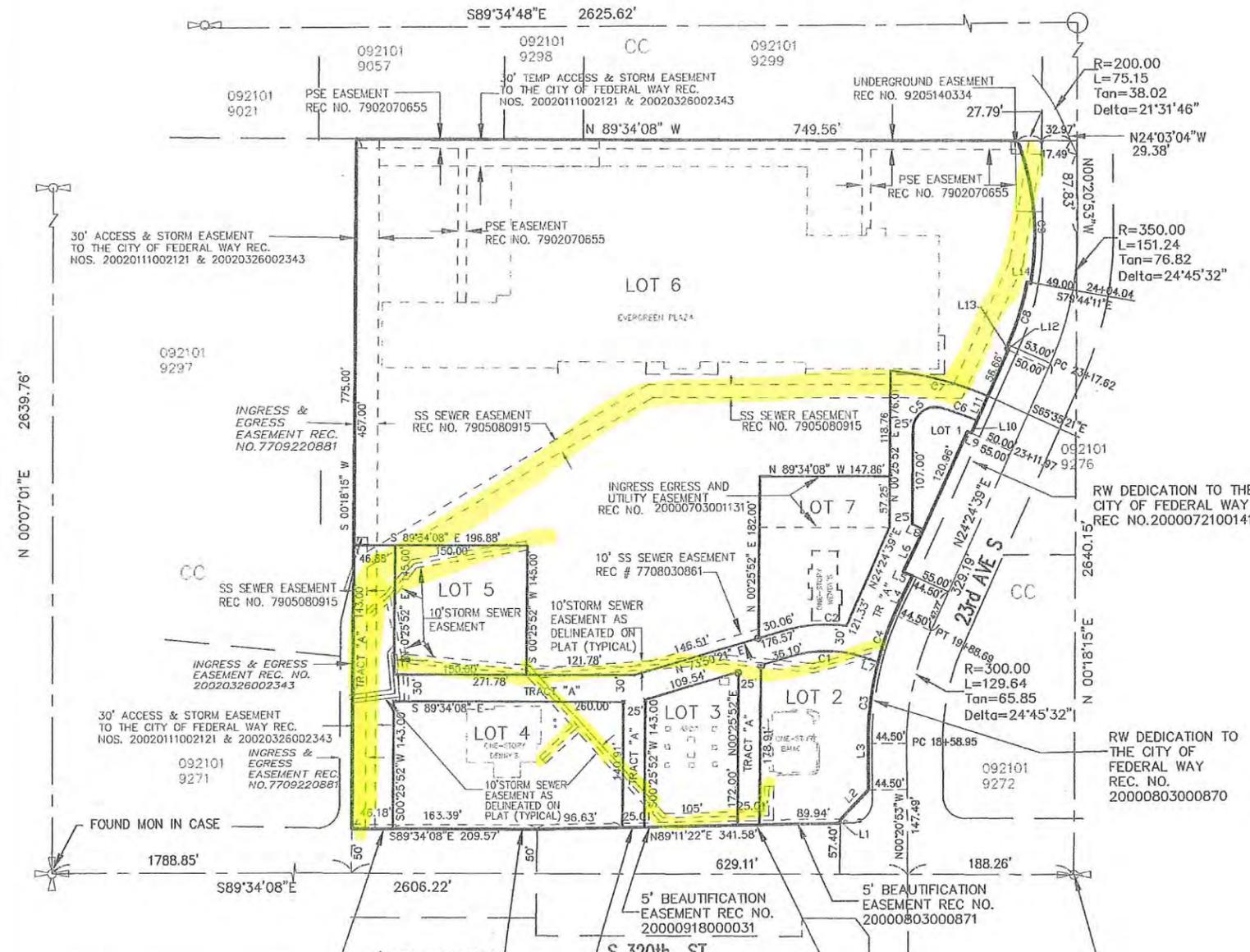
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SHEET 3 OF 3

DATE: FEBRUARY 1, 2003  
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KING COUNTY

SITE ID: Y Pay Mor Drycleaner

Cleanup Site ID: 3180

FS ID: 2518

Alternate Name(s): SEA TAC PLAZA, SEA-TAC PLAZA, Y PAY MOR DRYCLEANER

LOCATION: WRIA: 10      Lat/Long: 47.317      -122.305      [View Vicinity Map](#)

Address: 2210 S 320TH      98003      Township: 21N      Range: 4E      Section: 9      Legislative District: 30  
FEDERAL WAY      Congressional District: 9

STATUS: No Further Action      Rank:      [View Site Web Page](#)      Statute: MTCA      [View Site Documents](#)

Responsible Unit: Northwest      Site Manager: Atkinson, Elaine      Has Environmental Covenant? Yes      Is PSI Site?      NFA Received? Yes      NFA Date: 10/22/1998      NFA Reason: NFA-Independent Remedial Action Program Review

ASSOCIATED CLEANUP UNIT(S)

cuid	Cleanup Unit Name	Unit Type	Process Type	Unit Status	Size (Acres)	ERTS ID
1292	Y Pay Mor Drycleaner	Upland	Voluntary Cleanup Program	No Further Action Required		N18783

SITE ACTIVITIES:

Applies to:	Related ID (Unit-LUST-VCP)	Activity/Display Name	Status	Start Date	End Date	Legal Mechanism	Performed By	Project Manager
CleanupSite		Site Discovery/Release Report Received	Completed	8/8/1991	8/8/1991			Northwest Region
CleanupSite		Initial Investigation / Federal Preliminary Assessment	Completed	8/6/1991	8/6/1991			Northwest Region
CleanupSite		Site Status Changed to NFA	Completed	10/22/1998	10/22/1998			
Upland		Independent Report Review - Paid	Completed	1/6/1995	6/8/1995			Atkinson, Elaine

AFFECTED MEDIA & CONTAMINANTS:

Contaminant:	Media:						Key:
	Ground Water	Surface Water	Soil	Sediment	Air	Bedrock	
Base/Neutral/Acid Organics	R		R				B - Below Cleanup Level C - Confirmed Above Cleanup Level S - Suspected R - Remediated RA - Remediated-Above RB - Remediated-Below



IDENT#: N5617

DEPARTMENT OF ECOLOGY  
ERT SYSTEM - INITIAL REPORT/FOLLOWUP

INTERNAL REFERRAL INFORMATION:

NAME OF STAFF PERSON: HOOVER

DATE RECEIVED: 08/06/91  
DATE INVESTIGATED: 08/06/91  
DATE COMPLETED: 08/06/91

ACTION TAKEN: TELEPHONE  
CAUSE OF INCIDENT: EQUIP FAILURE  
IMPACT: BOTH

LUST: N

NONPOINT: (UNK, GW, SW) POINT: (UNK, SW, PRETMT)

ACTUAL VIOLATOR INFORMATION:

NAME: Y 'PAYMORE' CLEANERS  
ADDRESS: 2210 S 320  
CITY: FEDERAL WAY WA 98003  
HOME:  
WORK:

CONTACT:

ACTUAL CONTAMINANT:

MEDIUM: BLDG/STRUC  
MATERIAL: CHEMICALS  
QUANTITY: 6 GALLONS  
SOURCE: COMMERCIAL

OTHER: DRY CLEAN CHEMICALS

ENFORCEMENT SENSITIVE? (Y/N): N

CROSS-REFERENCES TO OTHER SYSTEMS: N-17-5295-000, N18783

OTHER RELEVANT INFORMATION:

SPOKE TO LT. SMITH. SITUATION HANDLED.

CLEANUP REPORT SUBMITTED FOR REVIEW THROUGH

TRAP. INTERIM LETTER ISSUED 6/8/95. REFER  
TO N18783. NFA issued 10/22/98. Restrictive  
Covenant filed. Per ~~Don Cargill~~ Don Cargill

**COMPLETED**

Closed out IIS

11/3/96

CF

WRITE ANY ADDITIONAL INFORMATION ON BACK OF FORM:



IDENT#: N18783

DEPARTMENT OF ECOLOGY  
ERT SYSTEM - INITIAL REPORT/FOLLOWUP

INTERNAL REFERRAL INFORMATION:

NAME OF STAFF PERSON: Atkinson  
ACTION TAKEN: visit  
CAUSE OF INCIDENT: \$improp. handling  
IMPACT: soil, gw contamin.

DATE RECEIVED: 1/6/95  
DATE INVESTIGATED: 4/14/95  
DATE COMPLETED: 5/31/95 6/8/95  
LUST:

NONPOINT: (UNK, GW, SW) POINT: (UNK, SW, PRETMT)

ACTUAL VIOLATOR INFORMATION:

NAME: Northwest Bldg. Corp.  
ADDRESS: 801 Second Ave, 1300 Norton Bldg  
CITY: Seattle, WA 98104  
HOME:  
WORK: (206) 464-5255

CONTACT: John Bickley

ACTUAL CONTAMINANT:

MEDIUM: soil, gw  
MATERIAL: halogenated organics OTHER: perchloroethylene  
QUANTITY: unknown  
SOURCE: improper handling

ENFORCEMENT SENSITIVE? (Y/N): N

CROSS-REFERENCES TO OTHER SYSTEMS: N-17-5295-800, ~~105617~~ 105617

OTHER RELEVANT INFORMATION:

Vapor extraction reduced concentrations of halogenated organics in soil; however, concentrations still exceeded cleanup levels. A restrictive covenant was therefore required, along with short-term confirmation sampling. Interim letter issued through IRAP. 6-9-95  
NFA issued 10-22-98 ~~and ongoing monitoring~~ - Reviewed by ~~Den~~ Den Cargill. Restrictive Covenant filed.

**COMPLETED**  
cloud out ILTS  
11/3/96

WRITE ANY ADDITIONAL INFORMATION ON BACK OF FORM:

Please return to Elaine

DEPARTMENT OF ECOLOGY ENVIRONMENTAL REPORT TRACKING - DRAFT INITIAL REPORT

RECORDER: O'HERRON REPORT TYPE: INITIAL REPORT #:
DATE & TIME RECEIVED: \_\_\_/\_\_\_/\_\_\_:\_\_\_

REPORTER'S NAME: DALE KRAMER ANONYMOUS:

BUSINESS NAME: AGRA EARTH & ENVIRONMENTAL
ADDRESS: 11335 NEE 122ND WAY, SUITE 100 PHONE WK: (206)820-4669
KIRKLAND, WA PHONE HM:

DETAILS OF INCIDENT:

COUNTY: KING NEAREST CITY: FEDERAL WAY
WATERWAY: \_\_\_\_\_ WRIA #: \_\_\_\_\_

DESCRIPTION OF LOCATION: 2210 S. 320TH STREET

ALLEGED VIOLATOR:

NAME: Y-PAY-MOR DRYCLEANERS/BEST SHOPPING MALL PHONE WK:
ADDRESS: 2210 S. 320TH STREET PHONE HM:
FEDERAL WAY, WA CONTACT:

VEHICLE INFORMATION:

DESCRIPTION OF CONTAMINANT:

MEDIA: SOIL/GROUNDWATER QUANTITY: UNKNOWN
MATERIAL: PCE OTHER MATERIAL:
SOURCE: COMMERCIAL

COMMENTS: Report submitted for review through IRAP. Report summarizes remedial investigation and remedial action taken regarding PCE in soil and groundwater. A vapor extraction system was installed and has been in operation for 1 1/2 years. They would like to cease remediation through a NFA determination.

DRAFT
T: TCP/SAU/ERTYPAY

FEDERAL WAY FIRE DEPARTMENT  
INCIDENT 4928 - 0 (ACTIVITY 107135)  
PAGE NO. 1  
OCT 9, 1991

FIRE INCIDENT REPORT

SECTION A - COMPLETE FOR ALL INCIDENTS

FDID 17D39 INCIDENT NUMBER 4928 -- 0 MULTIAGENCY NO. 0  
DATE 10/04/91 DISPATCH TIME 1516 ARRIVAL TIME 1521 END TIME 1545  
ADD DAYS 0 FIRST IN COMPANY 914 DISTRICT 1961F  
PROPERTY MANAGEMENT 1 AUTOMATIC OR MUTUAL AID 0 METHOD OF ALARM 1  
SITUATIONS FOUND 42 91 0 0 ACTIONS TAKEN 63 64 71 82  
WEATHER 1 AIR TEMPERATURE 60 CENSUS 0300.00  
INCIDENT ADDRESS/LOCATION 2210 S 320 ST FW  
ROOM/APARTMENT ZIP CODE 98003- FIRE HAZARD ZONE 0  
PEOPLE INVOLVED:  
CODE PO NAME GARY R MARTINDALE DOB / / 0  
ADDRESS 6124 1/2 MOTOR AVE TACOMA 98499 PHONE (206) 588-4425  
CODE OC NAME SOD KANG CHANG DOB / / 0  
ADDRESS 2210 S 320 ST FW 98003 PHONE (206) 946-2369  
RESPONDED: PAID 9 VOLUNTEER 0 ENGINE 3 TRUCK 0 AERIAL 1  
CMND 2 EMS 0 TANKER 0 RESCUE 0 HAZMAT 0 OTHER 0  
GENERAL PROPERTY USE 52 SPECIFIC PROPERTY USE 796 OCCUPANCY TYPE  
STRUCTURE STATUS 2 OCCUPIED AT TIME OF INCIDENT 1  
MOBILE PROPERTY INVOLVED:  
TYPE 98 VEHICLE LICENSE STATE  
YEAR 0 MAKE MODEL  
ICC/DOT PERMIT VIN

SECTION B - COMPLETE FOR CASUALTIES

FIRE SERVICE INJURIES 0 FIRE SERVICE FATALITIES 0  
NON-FIRE SERVICE INJURIES 0 NON-FIRE SERVICE FATALITIES 0

SECTION C - COMPLETE FOR ALL FIRES

CONTRIBUTING FACTORS 0 0 AREA OF FIRE ORIGIN 0 LEVEL OF FIRE ORIGIN  
FROM TRAVELED SURFACE 0 FORM OF HEAT OF IGNITION 0 IGNITION FACTOR 0  
CONTRIBUTING PERSONS #1 SEX/DOB / / 0 #2 SEX/DOB / / 0  
TYPE OF MATERIAL FIRST IGNITED 0 FORM OF MATERIAL FIRST IGNITED 0  
METHOD OF EXTINGUISHMENT 0 PROPERTY LOSS 0 CONTENTS 0  
FUEL MODEL ACRES BURNED 0.0  
EQUIPMENT INVOLVED:  
TYPE 0 MODEL YEAR 0  
MAKE SERIAL NO

SECTION D - COMPLETE FOR ALL STRUCTURE FIRES

CONSTRUCTION TYPE 0 ROOF COVERING 0 NUMBER OF STORIES 0  
FLAME DAMAGE 0 SMOKE DAMAGE 0 TYPE OF MATERIAL GENERATING MOST SMOKE 0  
FORM OF MATERIAL GENERATING MOST SMOKE 0 AVENUE OF SMOKE TRAVEL 0  
DETECTION SYSTEM TYPE 0 POWER 0 PERFORMANCE 0 REASON FOR FAILURE 0  
EXTINGUISHER SYSTEM: TYPE 0 PERFORMANCE 0 REASON FOR FAILURE 0  
SPRINKLER HEADS: TYPE 0 NUMBER ACTIVATED 0

SECTION E - COMPLETE FOR EMS

SITUATIONS FOUND 0 0 0 0 NUMBER OF PATIENTS 0  
HIGHEST LEVEL OF CARE PROVIDED: FIRE 0 OTHER 0  
TRANSPORTED BY: PVT AMB 0 PUB AMB 0 FIRE DEPT 0 OTHER 0

COPY

FEDERAL WAY FIRE DEPARTMENT  
INCIDENT 4928 - 0 (ACTIVITY 107135 )  
PAGE NO. 1  
OCT 9, 1991

FIRE INCIDENT REPORT

SECTION F - COMPLETE FOR HAZMAT

AREA OF RELEASE 38      LEVEL OF RELEASE A01      RELEASE FACTORS 22 32 42 56  
EST CHEMICALS RELEASED 1      EQUIPMENT INVOLVED 42      ACTIONS TAKEN 0 43 44 63  
DISPOSITION OF INCIDENT 7      IDENTIFICATION SOURCES USED 11 13 43 72  
FIRE SERVICE INJURIES 0      FIRE SERVICE FATALITIES 0  
NON-FIRE SERVICE INJURIES 0      NON-FIRE SERVICE FATALITIES 0  
HAZARDOUS MATERIAL IDENTIFIED:  
NAME PERCHLOROETHYLENE      DOT ID 0      DOT HAZARD CLASS 9      CAS NO.  
STATE STORED 2      STATE RELEASED 2      QUANTITY RELEASED 5      UNITS 12  
CONTAINER: TYPE 10      MATERIAL 1      DESC 1      CONSTRUCTION 0      CAPACITY 45      UNITS 0

SECTION G - COMPLETE IF OTHER THAN FIRE OR SHORT REPORT

LOCAL USE  
STATE USE

SECTION H - COMPLETE FOR ALL INCIDENTS

MEMBER MAKING REPORT  
FOBB/SMITH, BRAD K.

OFFICER IN CHARGE  
F026/POAGUE JR., ROBERT A.

SIGNATURE \_\_\_\_\_

SIGNATURE \_\_\_\_\_

REVIEWED BY \_\_\_\_\_

COPY

## FIRE INCIDENT REPORT NARRATIVE

1111

INCIDENT # 91-4928 ACTIVITY # 107135ADDRESS 2120 S 320 ST. (ACTUAL 2210 S 300)

- ① 916, 914, 906, 942, 962, 902 + FMD personnel responded to a reported chemical spill @ the "Y. PAY MOR" CLEANERS 2210 S 320 ST. Reported By Property maintenance personnel.
- ② 914 arrived (see additional narrative) and assisted with isolation of site & evacuation of occupancy.
- ③ THE OWNER OF THE BUSINESS MR. SOO KANG CHANG STATED THERE WAS NO-PROBLEM INSIDE. LT FROM 916 ASKED 914 CREW TO EVALUATE INTERIOR OF BLDG IN SCBA AND BUNKER GEAR & MR CHANG. MR. CHANG'S SURVEY AND STATEMENTS ARE INCLUDED IN 914'S NARRATIVE. 914 INITIALLY REPORTED NO-SPILL. ALL UNITS BUT 916, 914, 906 WERE RETURNED.
- ④ WHILE OBTAINING CONTACT INFORMATION 916 OFFICER DISCOVERED MR. CHANG ATTEMPTING TO WIP UP A BLACK/BROWN <sup>LIKE</sup> TAR SUBSTANCE FROM THE FLOOR NEAR THE DRY CLEANING MACHINES. I ASKED MR. CHANG WHAT THE SPILLED PRODUCT WAS AND HE STATED "NOT PERCH THIS OIL FROM MACHINE!" IT WAS LATER IDENTIFIED BY PHONE AS PERCHLOROETHYLENE 99.9% CONCENTRATED SLUDGE. CONFIRMED BY RON NELSON OF "SAFETY KEEPER" IN AUBURN. RON NELSON'S COMPANY RE PROCESSES THIS WASTE INTO USABLE PRODUCT. (939-2022). SEE PHONE LOG FOR CONTACT TIME.
- ⑤ ONCE THIS PRODUCT WAS IDENTIFIED THE BUSINESS WAS EVACUATED, SECURED AND AIR HANDLING SYSTEMS SHUT DOWN. ADJACENT OCCUPANCIES WERE CHECKED FOR EXTENSION OF PRODUCT. (SEE ADDITIONAL NARRATIVE)

COPD

FIRE INCIDENT REPORT NARRATIVE

UCRI.

INCIDENT # 91-4908 ACTIVITY # 107135

ADDRESS 2210 S 300 ST. 4 PAY MOR CLEANERS

⑥ ASSISTANCE FROM THE DEPT OF ECOLOGY WAS REQUESTED IN IDENTIFYING POTENTIAL CONTAMINATION & MITIGATION PROCEDURES.

⑦ IT WAS EXPLAINED TO MR CHANG THAT THE SPILL WOULD REQUIRE CLEAN UP BY A LICENSED HAZ MAT CONTRACTOR AND HE WAS HESITANT ABOUT THE COST FOR THIS CLEAN-UP. DEPT OF ECOLOGY ASSISTED IN EXPLAINING THE COST FOR PROPER CLEANUP & DISPOSAL.

⑧ CHAMARO DIVISION OF BURLINGTON ENVIRONMENTAL WAS SELECTED BY AND CONTACTED BY MR. CHANG FOR CLEAN UP. THEY WERE CALLED TO THE SCENE BY MR CHANG AND CONTACTED WITH MR CHANG TO CLEAN UP THE SPILLED AND CONTAMINATED MATERIALS. GARY BALDWIN WITH CHAMARO ARRIVED WITH HIS CREW AT 2045 TO BEGIN CLEANUP OPERATIONS. THEY DISCUSSED THEIR PLAN.

① THEY ARE OVER PACKING AND SKIING ALL CONTAMINATED RAGS, HARDWARE & DRUMS ON SITE

② THEY ARE SCRAPING THEN CLEANING WITH SOLVENT THE FLOOR AREAS CONTAMINATED.

③ STORE ALL WASTE ON SITE AND TEST FOR CLASSIFICATION OF PRODUCT ON MONDAY.

⑨ POLICE CHIEF CROSSMAN AND THE BLDG OFFICER THE BUSINESS IS TO REMAIN CLOSED UNTIL THE RESULTS OF THE PRODUCT ANALYSIS ARE KNOWN AND COMPLETE DECONTAMINATION OF THE SITE IS ASSURED. FMD STATED NO CURRENT HAZ MAT PERMIT HAD BEEN ISSUED FOR THE SITE SINCE 4/91. FMD

## FIRE INCIDENT REPORT NARRATIVE

DEF 1.

INCIDENT # 91-4928 ACTIVITY # 107135ADDRESS 2210 S 300 ST.

(10) ITEMS LEFT TO CONSIDER AND ACT UPON.

(1) DEPT OF LABOR AND INDUSTRIES INSPECTION FOR WORKER SAFETY & RIGHT TO KNOW ISSUES.

(2) THE DECEPTION BY MR. CHANG AS TO THE SPILLED MATERIALS NATURE AND STATING THE PRODUCT WAS NOT SPILLED.

(3) HEALTH DEPARTMENT NOTIFICATION DUE TO POSSIBLE PUBLIC EXPOSURE OF CUSTOMERS.

(4) PERMIT ISSUES FOR HAZ MAT PERMIT FROM FMO

(5) REMOVAL OF CONTAMINANTS FROM THE SITE.

(11) SUPPLEMENTAL REPORTS ATTACHED.

(1) 914'S REPORT NARRATIVE.

(2) EXPOSURE CONTAMINATION REPORTS

(3) FMO'S SUPPLEMENTAL NARRATIVES/NOTES.

(12) NOTE: MR. MARTINDALE (PROPERTY MGR) HAS  
PHOTOGRAPHS OF THE AREA PRIOR TO  
ANY CLEAN UP STARTING. HE STATED  
HE WOULD MAKE THEM AVAILABLE TO  
OUR INVESTIGATION.

COPY

## FIRE INCIDENT REPORT

## NARRATIVE

INCIDENT # 91-4928 ADDRESS 2120 S. 320 FW  
(2210 ACTUAL ADDRESS)

- 914 TO CHEMICAL SPILL AT Y PAY MOR CLEANERS -
- ① UOA STAGED UPWIND AND UPHILL APPROX 250'  
FROM STORE UNTIL ARRIVAL OF HAZ MAT LT.  
& 906 -
  - ② Evaluate Y PAY MOR & LIVING WELL LADY  
(OCC. NEXT DOOR)
  - ③ Man identifying himself as the owner and  
a woman identifying herself as MGR insisted  
there was no problem or spill.
  - ④ 914 crew AHLERS/MAHLEN INSTRUCTED TO ENTER  
Building w/ Full Bunkers & SCBA TO CHECK FOR  
SPILLS - OWNER ALREADY INSIDE - THE OWNER LED  
F.D. TO REPORTED PROBLEM AREA - NO SPILL OR LEAK  
FOUND. WHEN ASKED BY ACT LT AHLERS IF THERE  
WERE ANY OTHER CONTAINERS OR EQ. THE OWNER  
SAID NO. OWNER INSISTED THERE HAD BEEN NO PROBLEM.
  - ⑤ LT SMITH & AHLERS RE-ENTER BLDG FOR NAMES,  
ETC. APPROX 10 GAL SPILL OF UNK. BLACK,  
TARRY LIQ FOUND BEHIND SOME MACHINES -
  - ⑥ 914 RELEASED - 906, 916, FMO REMAINED AT  
SCENE

## FIRE INCIDENT REPORT

## NARRATIVE

INCIDENT # 91-3830 ADDRESS 2210 So 320 St.

E914 originally responded to an odor investigation at "Y-Pay-More" cleaners. Upon arrival the found a very strong chemical odor and felt slightly dizzy. They evacuated the occupancy and called for help. Upon 906's arrival found cleaners evacuated and was told a cleaning agent called "Perk" had spilled into and overflowed a 5 gallon plastic bucket. 906 assumed command, called for a Haz. Mat. unit from P.O.S. and F.W. off duty Haz Mat. team. Evacuated Living Well Lady a Salon and Partytime occupancies due to odors in those occupancies. Called for Puget Power to shut off electricity due to explosion concerns. Called supplier of Perk to obtain MSDS ~~etc~~ which they "Faxed" to Sta. 2. 912 officer assigned staging, 903 became Planning, 702 was Safety, 906 I.C. Capt. Kettenring assigned Decon and 932 Div. Co. (at rear for scene security until 135 took over) KCP Sgt. Thomas was Police Liason in C.P. Set up CP at front decon and staging areas also were in the front. M.S.C. Herbert was Med Com with M8 and 931 treating patients. Two firefighters and three civilians were originally treated and later 932 treated 2 more civilians. After P.O.S. 717 arrived and all equipment was ready an entry team entered in Level C protective clothing and cleaned up the spill by using absorbant materials and placed all of the contaminants

FIRE INCIDENT REPORT

NARRATIVE

INCIDENT # 91-3830 ADDRESS 2210 So 320 St.

After the entry team left the building they were decontaminated and checked out by Med. Com.

The occupant Chang, Soo Kang called ChemPro to clean the building and remove the decon pools etc. B906 and E914 remained until Chempro advised the occupancy was cleaned. All units returned leaving final clean-up and decon with ChemPro.

*JET*

**RZA AGRA, Inc.****MEMORANDUM**

11335 N.E. 122nd Way, Suite 100  
Kirkland, Washington 98034-6918  
Phone No. (206) 820-4589  
Fax No. (206) 821-3914

**TO:** Wayne Relsenauer/John Bickley  
Northwest Building Corporation

**DATE:** 18 April 1994

**FROM:** Dale Kramer

**FILE:** 11-07883-11

**RE:** NWBC/WDOE Meeting Agenda  
21 April 1994 Meeting

---

The meeting scheduled time is at 10:30 a.m. Thursday, 21 April 1994. The meeting is at WDOE (Bellevue). I understand that Mr. Brian Sato and Ms. Elaine Atkinson will be representing WDOE. The purpose of the meeting is to:

1. Discuss background/project history of NWBC's Independent Environmental efforts;
2. Present analytical test results on soil vapor extraction remediation trends;
3. Present analytical test results for groundwater from monitoring wells MW-2 and MW-3;
4. Discuss draft IRAP submittal;
5. Propose our intentions to decommission the soil remediation system in June 1994;
6. Discuss WDOE concerns (if any) concerning existing data and potential WDOE requests for additional data (if any).

See you Thursday at WDOE, Bellevue.

Respectfully submitted,  
RZA AGRA, Inc.

  
Dale A. Kramer, M.Sc., R.P.G.  
Project Scientist

DAK/lad

# Facsimile Transmission Cover



## RZA AGRA, Inc.

11335 NE 122nd Way  
Suite 100  
Kirkland, WA 98034-6918  
(206) 820-4669  
Fax: (206) 821-3914

Date: 4-20-94  
Time: 1300

Please deliver the following material as soon as possible:

Attention: VELAINE ATKINSON  
DRIAN SA'D Fax #: 649-7098

Company: WDOE / Bellevue

From: D.A. KRAMER

Includes cover plus 1 pages

Subject: meeting Agenda

Please notify RZA AGRA, Inc. immediately if not received properly.  
Call sender D.A. Kramer at (206) 820-4669

Remark Elaine-

9:00am 4/21

It looks like there will be 5 people coming to our meeting. I moved us to room 7-E (the bigger one).

Come hunt me down when you get in and we'll pow-wow.

*JS.*

Gary R. Martindale, CSM  
Asset Manager



**NORTHWEST  
BUILDING  
CORPORATION**

6124 1/2 Motor Ave., P.O. Box 98905  
Tacoma, WA 98499  
(206) 588-4425  
Fax (206) 582-6243  
Pager (206) 597-9762

Lakewood Colonial Center  
Sea Tac Plaza  
Black Lake Village  
Lacey Kmart

OFFICE  
(206) 682-3333

**JEFFREY S. MYERS**  
ATTORNEY AT LAW

LAW OFFICES  
SHORT CRESSMAN & BURGESS

3000 FIRST INTERSTATE CENTER  
999 THIRD AVENUE  
SEATTLE, WASHINGTON 98104-4008  
FAX: (206) 340-8856

Wayne E. Reisenauer  
Vice President



**NORTHWEST  
BUILDING  
CORPORATION**

1300 Norton Building  
801 Second Avenue  
Seattle, Washington 98104  
Fax (206) 464-5109  
(206) 464-3868

MELODY WESTERDAL, C.P.M.<sup>9</sup>

**THE  
NORMAN  
COMPANY**

1420 Fifth Avenue Suite 3600 Seattle, Washington 98101  
(206) 223-0200 FAX (206) 688-1356  
Direct: (206) 688-1456

Daryl S. Petrarca, R.E.A.  
Associate

 **AGRA**  
Earth & Environmental

AGRA Earth &  
Environmental, Inc.  
11335 NE 122nd Way  
Suite 100  
Kirkland, Washington  
U.S.A. 98034-6918  
Tel (206) 820-4669  
Fax (206) 821-3914



Elaine Atkinson  
 Northwest Regional Office  
 Toxics Cleanup Program ♥ S.H.A.  
 SCAN 354-7042

# CONVERSATION RECORD

DATE 6/28/94  
 TIME pm

TYPE

- VISIT                     
  CONFERENCE                     
  TELEPHONE  
   
  INCOMING  
   
  OUTGOING

Location of Visit/Conference:

NAME OF PERSON(S) CONTACTED OR IN CONTACT WITH YOU Dale Kramer	ORGANIZATION (Office, dept., bureau, etc.) RZA AGRA	TELEPHONE NO: 820-4669
--	---	------------------------

SUBJECT Y Pay Mor Cleaners, Federal Way

SUMMARY He called to let me know that, following our April 21 meeting, they had shut down the vapor extraction system for a month. Upon start up of the system, they were only able to recover 13 ppmV of tetrachloroethylene (PCE). He said he would now like to shut down the system for 2 months or so, then again start it up. If the PCE recovery remained low, he would like to install soil borings to confirm cleanup levels were met. The groundwater monitoring data shows cis-1,2-dichloroethylene at 5.4 ppb in the downgradient well (the MCL for cis-1,1-dichlor is 70 ppb, and the MCL is considered to be sufficiently protective of public health for use as a MTCA cleanup level). If confirmation samples show PCE cleanup levels are met, he will probably initiate an IRAP review. I asked whether any records of hazardous waste disposal practices were located for the post-1990 operator of the facility, and he said he doesn't believe so. He says the Northwest Building Corporation representatives may not be very receptive to the idea of a restrictive covenant. He said he will be in touch.

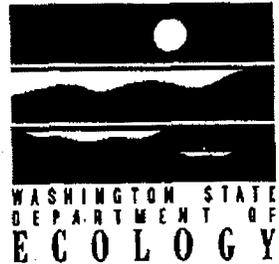
ACTION REQUIRED

NAME OF PERSON DOCUMENTING CONVERSATION	SIGNATURE	DATE
Elaine Atkinson	<i>Elaine Atkinson</i>	6/28/94

ACTION TAKEN

SIGNATURE	TITLE	DATE

DEPARTMENT OF ECOLOGY  
NORTHWEST REGIONAL OFFICE  
FACSIMILE COVER SHEET



DATE: 12/8/94

TIME: 4:30

Number of Pages: \_\_\_\_\_ Plus Cover Sheet

TO: Dan kentch  
Safety-kleen

FAX # 939-7277

FROM: Elaine Atkinson

PHONE: 649-7042 SECTION: Toxics Clean up

Department of Ecology  
Northwest Regional Office  
3190 - 160th Avenue S.E.  
Bellevue, WA 98008-5452  
Phone: (206) 649-7000  
Fax: (206) 649-7098  
SCAN 354-7098

COMMENTS: By transmittal of the attached  
memo signed by me I concur that I  
am requesting solvent disposal records  
for the former Y Pay Mor Dry Cleaner  
at 2210 - 320th St. S. in Federal Way.

Elaine Atkinson

AGRA Earth & Environmental, Inc.

FACSIMILE TRANSMITTAL

TO: ELAINE ATKINSON

11335 N.E. 122nd Way, Suite 100  
Kirkland, Washington 98034-6918

COMPANY: WDOE

Phone No. (206) 820-4669

FAX No. (206) 821-3914

FAX NO.: 649-7098

SENDER: D.A. KRAMER

FILE NO.: 11-7883-11

FAX OPERATOR:

DATE: 12-8-94

NO. OF PAGES: 2 (including this page)

FAX 939-7277  
(Safety Kleen)

This transmission is intended only for the Addressee. It may contain privileged or confidential information. Any unauthorized disclosure is strictly prohibited. If you have received this transmission in error, please notify us immediately (contact) so that we may correct our transmission. Please then destroy the original. Thank you.

Elaine pls. call me if there are problems with  
the memo

0:

**AGRA EARTH & ENVIRONMENTAL, INC.**

**MEMORANDUM**

11335 N.E. 122nd Way, Suite 100  
Kirkland, Washington 98034-6918  
Phone No. (206) 820-4669  
Fax No. (206) 821-3914

*WDOE*  
TO: Ms. Elaine Atkinson  
Via Fax 649-7078

DATE: 8 December 1994

FROM: Dale Kramer

FILE: 11-07883-11

RE: Former Y Pay Mor Dry Cleaner

---

Regarding your request at our 21 April 1994 meeting we have located records of solvent disposal for the former Y Pay Mor Dry Cleaner.

The records are available from Safety-Kleen Auburn. Safety-Kleen requests that WDOE fax a memo to Safety-Kleen requesting Y Pay Mor's account records. Please fax your request for the records to:

Mr. Dan Kentch, Manager  
Safety-Kleen, Auburn  
(f) 206-939-7277  
(p) 206-939-2022

Please note that the address to the former Y Pay Mor Dry Cleaner was 2210 320th Street South, Federal Way, Washington.

If you have any questions or comments, please contact Dale A. Kramer at 206-820-4669.

*Elaine Atkinson* Dept. of Ecology  
*Dale A. Kramer* for Agri E+E.

cc: John Bickley, NWBC *By FAX*  
Safety-Kleen, Auburn *File*  
*FILE*



# Safety-Kleen

Date: 1-3-95  
Time: 4:30 pm

Please deliver these 40 pages, including this cover to:

Name: Elaine Atkinson

Firm: D.O.F.

Dept: \_\_\_\_\_

Phone Number: 649-7042

Sent by: Brand

Safety-Kleen Corporation, Auburn Branch 1-181-01

Notes: If you need any further assistance,  
please give me a call  
Brand Davis

If there is a problem or if you do not receive all the pages, please call as soon as possible. 206-939-2022

## Merry Christmas and Happy New Year



1662 11617

<b>UNIFORM HAZARDOUS WASTE MANIFEST</b>		1. Generator's US EPA ID No. 20000000000000000000	Manifest Document No. 70807		2. Page 1 of 1	Information in the shaded areas is not required by Federal law.				
3. Generator's Name and Mailing Address Y PAY MORE CLARKS 2210 S 320TH ST FEDERAL WAY WA 98003					A. State Manifest Document Number					
4. Generator's Phone (206) 946-2369					B. State Generator's ID					
5. Transporter 1 Company Name SAFETY-KLEEN CORP.			6. US EPA ID Number MAD0000012059		C. State Transporter's ID					
7. Transporter 2 Company Name			8. US EPA ID Number		D. Transporter's Phone 206/939-2022					
9. Designated Facility Name and Site Address SAFETY-KLEEN CORP. 3210 C STREET NE ALBUQUERQUE, WA 98002			10. US EPA ID Number MAD0000012059		E. State Transporter's ID					
					F. Transporter's Phone					
					G. State Facility's ID					
					H. Facility's Phone 206/939-2022					
GENERATOR	11. US DOT Description (Including Proper Shipping Name, Hazard Class and ID Number)				12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	15. Waste No.	
	a.	RM X RD, WASTE PERCHLOROETHYLENE, ORM-A, UN1897 (EPA TOXICITY, F002)			4	DF	780	P	F002	
	b.	X RD, Waste Perchloroethylene, ORM-A, UN1897 (EPA Toxicity, F002)			10	DM	600	P	F002	
	c.	<del> </del>			<del> </del>	<del> </del>	<del> </del>	<del> </del>	<del> </del>	
	d.	<del> </del>			<del> </del>	<del> </del>	<del> </del>	<del> </del>	<del> </del>	
J. Additional Descriptions for Materials Listed Above FOR RECYCLE					K. Handling Codes for Wastes Listed Above					
15. Special Handling Instructions and Additional Information 1-181-51-1026 778007 6PT TERR 03 WK 8728										
16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations. If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.										
Printed/Typed Name x SIKSON BLICK					Signature x William Miller			Date 7/22/87		
TRANSPORTER	17. Transporter 1 Acknowledgement of Receipt of Materials									
	Printed/Typed Name JOHN R. PAIR					Signature John R. Pair			Date 7/22/87	
	18. Transporter 2 Acknowledgement of Receipt of Materials									
Printed/Typed Name					Signature			Date		
FACILITY	19. Discrepancy Indication Space									
	20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in item 19.									
Printed/Typed Name Leslie C Nash					Signature Leslie C Nash			Date 7/22/87		

<b>UNIFORM HAZARDOUS WASTE MANIFEST</b>		1. Generator's US EPA ID No. WA0980983084	Manifest Document No. 81996		2. Page 1 of 1	Information in the shaded areas is not required by Federal law.					
3. Generator's Name and Mailing Address Y PAY MORE CLRNS 2210 S 320TH ST FEDERAL WAY WA 98003					A. State Manifest Document Number						
4. Generator's Phone ( 206 ) 946-2369					B. State Generator's ID						
5. Transporter 1 Company Name SAFETY-KLEEN-CORP.		6. US EPA ID Number 110051060408	C. State Transporter's ID		D. Transporter's Phone 206/939-2022						
7. Transporter 2 Company Name		8. US EPA ID Number	E. State Transporter's ID		F. Transporter's Phone						
9. Designated Facility Name and Site Address SAFETY-KLEEN CORP. 3210 C STREET NE UNIT G AUBURN, WA 98002					10. US EPA ID Number WA0000712059		G. State Facility's ID				
					H. Facility's Phone 206/939-2022						
GENERATOR	11. US DOT Description (Including Proper Shipping Name, Hazard Class and ID Number)					12. Containers No.	13. Total Quantity	14. Unit Wt/Vol	15. Waste No.		
	a.	RM WASTE PERCHLOROETHYLENE, ORM-A, UN1897 (EPA TOXICITY 6002)					10	DM	600	P	6002
	b.										
	c.										
	d.	NOTICE: IN ACCORDANCE WITH 40 CFR 260.7, THE GENERATOR PROVIDES NOTICE THAT THE WASTE DESCRIBED AS "WASTE PERCHLOROETHYLENE" IS A RESTRICTED WASTE. THE WASTE CONTAINS THE FOLLOWING CONSTITUENT WHOSE TREATMENT STANDARD IS NOTED: TETRACHLOROETHYLENE (0.05 PPM).									
J. Additional Descriptions for Materials Listed Above FOR RECYCLE						K. Handling Codes for Wastes Listed Above					
15. Special Handling Instructions and Additional Information 1-181-51-1026 081996 6PT FERR 08 WK 8732											
16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable International and national government regulations. If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.											
Printed/Typed Name KW Mitchell					Signature <i>[Signature]</i>		Date 8/18/87				
TRANSPORTER	17. Transporter 1 Acknowledgement of Receipt of Materials					Date					
	Printed/Typed Name JOAN R. PAIV					Signature <i>[Signature]</i>		Date 8/18/87			
	18. Transporter 2 Acknowledgement of Receipt of Materials					Date					
Printed/Typed Name					Signature		Date				
FACILITY	19. Discrepancy Indication Space										
	20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in item 19.										
Printed/Typed Name Lashie C. Nash					Signature <i>[Signature]</i>		Date 8/18/87				

<b>UNIFORM HAZARDOUS WASTE MANIFEST</b>		1. Generator's US EPA ID No. WA0980993084	Manifest Document No. 90513		2. Page 1 of 1	Information in the shaded areas is not required by Federal law.			
3. Generator's Name and Mailing Address Y PAY MORE CLNRS 2210 S 320TH ST FEDERAL WAY WA 98003					A. State Manifest Document Number				
4. Generator's Phone (206) 946-2369					B. State Generator's ID				
5. Transporter 1 Company Name SAFETY-KLEEN-CORP.			6. US EPA ID Number 11005106040A		C. State Transporter's ID				
7. Transporter 2 Company Name			8. US EPA ID Number		D. Transporter's Phone 206/939-2022				
					E. State Transporter's ID				
					F. Transporter's Phone				
9. Designated Facility Name and Site Address SAFETY-KLEEN CORP. 3210 C STREET NE UNIT G AUBURN, WA 98007					10. US EPA ID Number WA0000712059				
					G. State Facility's ID				
					H. Facility's Phone 206/939-2022				
11. US DOT Description (Including Proper Shipping Name, Hazard Class and ID Number)						12. Containers No.	13. Total Quantity	14. Unit Wt/Vol	15. Waste No.
a. <input checked="" type="checkbox"/> RM WASTE PERCHLOROETHYLENE, ORM-A, UN1897 (EPA, TOXICITY, P002)						13	780	P	P002
b. <input checked="" type="checkbox"/> RM WASTE PERCHLOROETHYLENE, ORM-A, UN1897 (EPA, TOXICITY, P002)						4	780	P	P002
c.									
d. NOTICE: IN ACCORDANCE WITH 40 CFR 268.7, THE GENERATOR PROVIDES NOTICE THAT THE WASTE DESCRIBED AS "WASTE PERCHLOROETHYLENE" IS A RESTRICTED WASTE. THE WASTE CONTAINS THE FOLLOWING CONSTITUENT WHOSE TREATMENT STANDARD IS NOTED: TETRACHLOROETHYLENE (0.05 PPM).									
J. Additional Descriptions for Materials Listed Above FOR RECYCLE						K. Handling Codes for Wastes Listed Above			
15. Special Handling Instructions and Additional Information 1-181-51-1026 390513 6PT TERR OR WK 8736									
16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations. If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.									
Printed/Typed Name R W Mitchell					Signature <i>R W Mitchell</i>			Date 9/18/87	
17. Transporter 1 Acknowledgement of Receipt of Materials									
Printed/Typed Name DAN KENTCH					Signature <i>Dan Kentch</i>			Date 9/18/87	
18. Transporter 2 Acknowledgement of Receipt of Materials									
Printed/Typed Name					Signature			Date	
19. Discrepancy Indication Space									
20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.									
Printed/Typed Name Kasei C Nash					Signature <i>Kasei C Nash</i>			Date 9/18/87	

<b>UNIFORM HAZARDOUS WASTE MANIFEST</b>		1. Generator's US EPA ID No. WA0980981084	Manifest Document No. 98973	2. Page 1 of 1	Information in the shaded areas is not required by Federal law.	
3. Generator's Name and Mailing Address V PAY MORE CLNRS 2210 S 320TH ST FEDERAL WAY WA 98003				A. State Manifest Document Number		
4. Generator's Phone (206) 946-2369				B. State Generator's ID		
5. Transporter 1 Company Name SAFETY-KLEEN-CORP.		6. US EPA ID Number LA0054060406		C. State Transporter's ID		
7. Transporter 2 Company Name		8. US EPA ID Number		D. Transporter's Phone 206/939-2022		
9. Designated Facility Name and Site Address SAFETY-KLEEN CORP. 3210 C STREET NE UNIT G AUBURN WA 98002		10. US EPA ID Number WA0000712059		E. State Transporter's ID		
				F. Transporter's Phone		
				G. State Facility's ID		
				H. Facility's Phone 206/939-2022		
11. US DOT Description (Including Proper Shipping Name, Hazard Class and ID Number)				12. Containers No.	13. Total Quantity	14. Unit Wt/Vol
HM	a. X	AQ, WASTE PERCHLOROETHYLENE, DRUM-A, UN1697 (EPA, TOXICITY, 6002)		10	DM	600 P
	b.					
	c.					
	d.	NOTICE: IN ACCORDANCE WITH 40 CFR 268.7, THE GENERATOR PROVIDES NOTICE THAT THE WASTE DESCRIBED AS WASTE PERCHLOROETHYLENE IS A RESTRICTED WASTE. THE WASTE CONTAINS THE FOLLOWING CONSTITUENT WHOSE TREATMENT STANDARD IS NOTED: TETRACHLOROETHYLENE (0.05 PPH).				
J. Additional Descriptions for Materials Listed Above FOR RECYCLE				K. Handling Codes for Wastes Listed Above		
15. Special Handling Instructions and Additional Information 1-181-51-1026 698973 GPV YEAR 08 WK 8740						
16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations. If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.						
Printed/Typed Name James A MERTL				Signature <i>James A MERTL</i>		Date Month Day Year 10 23 87
17. Transporter 1 Acknowledgement of Receipt of Materials				Signature <i>Dan Kentz</i>		Date Month Day Year 10 23 87
Printed/Typed Name DAN KENTZ				Signature		Date
18. Transporter 2 Acknowledgement of Receipt of Materials				Signature		Date
Printed/Typed Name				Signature		Date
19. Discrepancy Indication Space						
20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.						
Printed/Typed Name Leslie C Nash				Signature <i>Leslie C Nash</i>		Date Month Day Year 10 23 87

<b>UNIFORM HAZARDOUS WASTE MANIFEST</b>		1. Generator's US EPA ID No. WA0980983084	Manifest Document No. 62412	2. Page 1 of 1	Information in the shaded areas is not required by Federal law.	
3. Generator's Name and Mailing Address Y PAY MORE CLNRS 2210 S 320TH ST FEDERAL WAY WA 98003				A. State/Manifest Document Number		
4. Generator's Phone (206) 946-2369				B. State/Generator's ID		
5. Transporter 1 Company Name SAFETY-KLEEN-CORP.		6. US EPA ID Number ILD051060408		C. State/Transporter's ID		
7. Transporter 2 Company Name		8. US EPA ID Number		D. Transporter's Phone 206/939-2022		
9. Designated Facility Name and Site Address SAFETY-KLEEN CORP. 3210 C STREET NE UNIT C AUBURN, WA 98002		10. US EPA ID Number WA0000712059		E. State/Transporter's ID		
				F. Transporter's Phone		
				G. State/Facility's ID		
				H. Facility's Phone 206/939-2022		
11. US DOT Description (Including Proper Shipping Name, Hazard Class and ID Number)		12. Containers No. Type		13. Total Quantity	14. Unit Wt/Vol	15. Waste No.
a. X RQ, WASTE PERCHLOROETHYLENE, ORM-A, UN1897 (EPA, TOXICITY, F002)		4 DF		780	P	F002
b. X RQ, WASTE PERCHLOROETHYLENE, ORM-A, UN1897 (EPA, TOXICITY, F002)		2 DM		120	P	F002
c.						
d. NOTICE: IN ACCORDANCE WITH 40 CFR 268.7, THE GENERATOR PROVIDES NOTICE THAT THE WASTE DESCRIBED AS 'WASTE PERCHLOROETHYLENE' IS A RESTRICTED WASTE. THE WASTE CONTAINS THE FOLLOWING CONSTITUENT WHOSE TREATMENT STANDARD IS NOTED: TETRACHLOROETHYLENE (0.05 PPM).						
J. Additional Descriptions for Materials Listed Above FOR RECYCLE				K. Handling Codes for Wastes Listed Above		
15. Special Handling Instructions and Additional Information 1-181-51-1026 162412 6PT YERR 08 WK 0746						
16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations. If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.						
Printed/Typed Name DAN KONTEH				Signature <i>[Signature]</i>		Month Day Year 11/20/87
17. Transporter 1 Acknowledgement of Receipt of Materials				Signature <i>[Signature]</i>		Date 11/20/87
18. Transporter 2 Acknowledgement of Receipt of Materials				Signature		Date
19. Discrepancy Indication Space						
20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.						
Printed/Typed Name Leslie C Nash				Signature <i>[Signature]</i>		Month Day Year 11/20/87

<b>UNIFORM HAZARDOUS WASTE MANIFEST</b>		1. Generator's US EPA ID No. WA0980983084	Manifest Document no. 81073	2. Page 1 of 1	Information in the shaded areas is not required by Federal law.	
		3. Generator's Name and Mailing Address Y PAY MORE CLNRS 2210 S 320TH ST FEDERAL WAY WA 98003		A. State Manifest Document Number	B. State Generator's ID	
4. Generator's Phone (206) 946-2369		5. Transporter 1 Company Name SAFETY-KLEEN-CORP.	6. US EPA ID Number YL0051060408	C. State Transporter's ID	D. Transporter's Phone 206/939-2022	
7. Transporter 2 Company Name		8. US EPA ID Number	9. Designated Facility Name and Site Address SAFETY-KLEEN CORP. 3210 C STREET NE UNIT G AUBURN, WA 98002	E. State Transporter's ID	F. Transporter's Phone	
		10. US EPA ID Number WA0000712069		G. State Facility's ID	H. Facility's Phone 206/939-2022	
GENERATOR	11. US DOT Description (Including Proper Shipping Name, Hazard Class and ID Number)		12. Containers	13. Total Quantity	14. Unit Wt/Vol	15. Waste No.
	HM		No. Type			
	a.	X HQ, WASTE PERCHLOROETHYLENE, ORM-A, UN1897 (EPA, TOXICITY, F002)	2 DF	390	P	F002
	b.	X HQ, WASTE PERCHLOROETHYLENE, ORM-A, UN1897 (EPA, TOXICITY, F002)	8 DM	480	P	F002
	c.					
d.	NOTICE: IN ACCORDANCE WITH 40 CFR 268.7, THE GENERATOR PROVIDES NOTICE THAT THE WASTE DESCRIBED AS WASTE PERCHLOROETHYLENE IS A RESTRICTED WASTE. THE WASTE CONTAINS THE FOLLOWING CONSTITUENT WHOSE TREATMENT STANDARD IS NOTED: TETRACHLOROETHYLENE (0.05 PPM).					
J. Additional Descriptions for Materials Listed Above FOR RECYCLE				K. Handling Codes for Wastes Listed Above		
15. Special Handling Instructions and Additional Information 1-181-51-1026 481073 6PT YERR 08 WK 8750						
16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations. If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.						
Printed/Typed Name K W Mitchell		Signature <i>[Signature]</i>		Date 12/16/87		
TRANSPORTER	17. Transporter 1 Acknowledgement of Receipt of Materials					
	Printed/Typed Name DAN KENTCH		Signature <i>[Signature]</i>		Date 12/16/87	
	18. Transporter 2 Acknowledgement of Receipt of Materials					
Printed/Typed Name		Signature		Date		
19. Discrepancy Indication Space						
FACILITY	20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.					
	Printed/Typed Name Leslie C Nash		Signature <i>[Signature]</i>		Date 12/16/87	

# 1988 TSD FACILITY ANNUAL DANGEROUS WASTE REPORT 1988 FORM 5

13. YOUR EPA/STATE HAZARDOUS WASTE IDENTIFICATION NUMBER: WA 0000712059

14. GENERATOR'S EPA/STATE I.D. NUMBERS: WA 0980983084

NAME: Y PAV MORE CLNRS  
 ADDRESS: 2210 S 320TH ST  
 FEDERAL WAY WA ZIP: 98003

I-181-51-1025

LINE NUMBER	15. WASTE IDENTIFICATION		D. Physical State L-Liquid	E. Chemical Nature O-Organic	F. Waste Description (see instructions)	G. Handling Method	H. Dangerous Waste Number	I. Waste Designation	J. Amount of Waste
	A. Manifest Document Number	B. Date of Shipment Received							
1	34920	011388	L	O	CHLORINATED SOLV & FILTERS (PERC) DRY CLNR F002	C S O 1 C F 0 0 2	1	EHW	360
2	34920	011388	L	O	CHLORINATED SOLV & FILTERS (PERC) DRY CLNR F002	C S O 1 C F 0 0 2	1	EHW	195
3	34920	011388	L	O	CHLORINATED SOLV & FILTERS (PERC) DRY CLNR F002	C S O 1 C F 0 0 2	1	EHW	195
4	595	020888	L	O	CHLORINATED SOLV & FILTERS (PERC) DRY CLNR F002	C S O 1 C F 0 0 2	1	EHW	480
5	95595	020888	L	O	CHLORINATED SOLV & FILTERS (PERC) DRY CLNR F002	C S O 1 C F 0 0 2	1	EHW	195
6	95595	020888	L	O	CHLORINATED SOLV & FILTERS (PERC) DRY CLNR F002	C S O 1 C F 0 0 2	1	EHW	195
7	04885	030788	L	O	CHLORINATED SOLV & FILTERS (PERC) DRY CLNR F002	C S O 1 C F 0 0 2	1	EHW	240
8	04885	030788	L	O	CHLORINATED SOLV & FILTERS (PERC) DRY CLNR F002	C S O 1 C F 0 0 2	1	EHW	70
9	04685	030788	L	O	CHLORINATED SOLV & FILTERS (PERC) DRY CLNR F002	C S O 1 C F 0 0 2	1	EHW	490
10	24312	040588	L	O	CHLORINATED SOLV & FILTERS (PERC) DRY CLNR F002	C S O 1 C F 0 0 2	1	EHW	360
11	24312	040588	L	O	CHLORINATED SOLV & FILTERS (PERC) DRY CLNR F002	C S O 1 C F 0 0 2	1	EHW	70
12	24312	040588	L	O	CHLORINATED SOLV & FILTERS (PERC) DRY CLNR F002	C S O 1 C F 0 0 2	1	EHW	70
13	24312	040588	L	O	CHLORINATED SOLV & FILTERS (PERC) DRY CLNR F002	C S O 1 C F 0 0 2	1	EHW	390
14	4851	050688	L	O	CHLORINATED SOLV & FILTERS (PERC) DRY CLNR F002	C S O 1 C F 0 0 2	1	EHW	240
15	36851	050688	L	O	CHLORINATED SOLV & FILTERS (PERC) DRY CLNR F002	C S O 1 C F 0 0 2	1	EHW	585

16. COMMENTS (Enter information by section and/or line number--see instructions).

1988

TSD FACILITY ANNUAL DANGEROUS WASTE REPORT

1988

FORM 5

13. YOUR EPA/STATE HAZARDOUS WASTE IDENTIFICATION NUMBER

WA 0000712059

14. GENERATOR'S EPA/STATE I.D. NUMBERS

I.D. NUMBER  
WA 0980983084

NAME: FAY MORE CUNNIS  
ADDRESS: 2210 S 320TH ST  
FEDERAL WAY

WA ZIP: 98003

1-181-51-1026

L I N E	15. WASTE IDENTIFICATION					F Waste Description (see instructions)	G Handling Method		H Dangerous Waste Number	I Waste Disposal Method	J Amount of Waste	K Units	
	A Manifest Document Number	B Date Shipment Received	C Quantity	D Physical State L-Liquid O-Organic	E Chemical Name		1 C	2 S					3 U
16	16851	050888		L	O	CHLORINATED SOLV & FILTERS (PERC) DRY CLNR F002	C	S	U	T	C	195	P
17	51340	060188		L	O	CHLORINATED SOLV & FILTERS (PERC) DRY CLNR F002	C	S	U	T	C	60	P
18	51340	060188		L	O	CHLORINATED SOLV & FILTERS (PERC) DRY CLNR F002	C	S	U	T	C	360	P
19	285	060388		L	O	CHLORINATED SOLV & FILTERS (PERC) DRY CLNR F002	C	S	U	T	C	390	P
20	66381	062788		L	O	CHLORINATED SOLV & FILTERS (PERC) DRY CLNR F002	C	S	U	T	C	720	P
21	66381	062788		L	O	CHLORINATED SOLV & FILTERS (PERC) DRY CLNR F002	C	S	U	T	C	390	P
22	66381	062788		L	O	CHLORINATED SOLV & FILTERS (PERC) DRY CLNR F002	C	S	U	T	C	195	P
23	93089	072888		L	O	CHLORINATED SOLV & FILTERS (PERC) DRY CLNR F002	C	S	U	T	C	190	P
24	93089	072888		L	O	CHLORINATED SOLV & FILTERS (PERC) DRY CLNR F002	C	S	U	T	C	60	P
25	93089	072888		L	O	CHLORINATED SOLV & FILTERS (PERC) DRY CLNR F002	C	S	U	T	C	1,170	P
26	12525	082488		L	O	CHLORINATED SOLV & FILTERS (PERC) DRY CLNR F002	C	S	U	T	C	60	P
27	12525	082488		L	O	CHLORINATED SOLV & FILTERS (PERC) DRY CLNR F002	C	S	U	T	C	180	P
28	12525	082488		L	O	CHLORINATED SOLV & FILTERS (PERC) DRY CLNR F002	C	S	U	T	C	585	P
29	1692	092288		L	O	CHLORINATED SOLV & FILTERS (PERC) DRY CLNR F002	C	S	U	T	C	360	P
30	10692	092288		L	O	CHLORINATED SOLV & FILTERS (PERC) DRY CLNR F002	C	S	U	T	C	195	P

16. COMMENTS (Enter information by section and/or line number-see instructions).



1989

# TSD FACILITY ANNUAL DANGEROUS WASTE REPORT

1989

FORM 5

I-181-51-1026

13. YOUR EPA/STATE HAZARDOUS WASTE IDENTIFICATION NUMBER

WA 000712059

14. GENERATOR'S EPA/STATE I.D. NUMBERS

WA 0999933084

NAME: Y PAY MORE GUNRS  
ADDRESS: 2210 S 320TH ST  
FEDERAL WAY

WA ZIP: 98003

LINE NUMBER	A. Manifest Document Number	B. Date Shipment Received	C. Physical State (S, L, O, P)	D. Chemical Nature (O, G, L, S)	E. Waste Description (see instructions)	F. Handling Method	G. Hazardous Waste Number	H. Waste Designation (D-DW)	I. Amount of Waste	J. Comments
1	40823	011189	L	O	WASTE PERCHLOROETHYLENE	C S O 1 U F 0 0 2	1	D	390	P
	89188	021489	L	O	WASTE PERCHLOROETHYLENE	C S O 1 U F 0 0 2	1	D	935	P
3	95449	030889	L	O	WASTE PERCHLOROETHYLENE	C S O 1 U F 0 0 2	1	D	600	P
4	23813	040489	L	O	WASTE PERCHLOROETHYLENE	C S O 1 U F 0 0 2	1	D	1,075	P
5	36827	050189	L	O	WASTE PERCHLOROETHYLENE	C S O 1 U F 0 0 2	1	D	655	P
6	32248	080189	L	O	WASTE PERCHLOROETHYLENE	C S O 1 U F 0 0 2	1	D	1,170	P
7	28267	062889	L	O	WASTE PERCHLOROETHYLENE	C S O 1 U F 0 0 2	1	D	1,145	P
8	26898	072789	L	O	WASTE PERCHLOROETHYLENE	C S O 1 U F 0 0 2	1	D	475	P
9	27857	082189	L	O	WASTE PERCHLOROETHYLENE	C S O 1 U F 0 0 2	1	D	865	P
10	18868	092589	L	O	WASTE PERCHLOROETHYLENE	C S O 1 U F 0 0 2	1	D	1,340	P
11	28384	101989	L	O	WASTE PERCHLOROETHYLENE	C S O 1 U F 0 0 2	1	D	585	P
	30848	111689	L	O	WASTE PERCHLOROETHYLENE	C S O 1 U F 0 0 2	1	D	780	P
13	35243	121589	L	O	WASTE PERCHLOROETHYLENE	C S O 1 U F 0 0 2	1	D	1,145	P

16. COMMENTS (Enter information by section and/or line number-see instructions)

10/10/10

1989

TSD FACILITY ANNUAL DANGEROUS WASTE REPORT

1989

13. YOUR EPA/STATE HAZARDOUS WASTE IDENTIFICATION NUMBER

WA ID 000712059

14. GENERATOR'S EPA/STATE I.D. NUMBERS

ID NUMBER  
WA ID 980983084

NAME: FEDERAL WAY  
ADDRESS: 2210 S 320TH ST  
FAY MORE CLERS

FEDERAL WAY

WA ZIP:

LINE	15. WASTE IDENTIFICATION					F	G	H	I
	A	B	C	D	E				
1	40823	011189	L	O		WASTE PERCHLOROETHYLENE	C S 0 1 U F 0 0 2		
	88188	021488	L	O		WASTE PERCHLOROETHYLENE	C S 0 1 U F 0 0 2		
3	85449	030889	L	O		WASTE PERCHLOROETHYLENE	C S 0 1 U F 0 0 2		
4	23913	040488	L	O		WASTE PERCHLOROETHYLENE	C S 0 1 U F 0 0 2		
5	36827	050189	L	O		WASTE PERCHLOROETHYLENE	C S 0 1 U F 0 0 2		
6	32248	060189	L	O		WASTE PERCHLOROETHYLENE	C S 0 1 U F 0 0 2		
7	28267	062889	L	O		WASTE PERCHLOROETHYLENE	C S 0 1 U F 0 0 2		
8	26839	072789	L	O		WASTE PERCHLOROETHYLENE	C S 0 1 U F 0 0 2		
9	27857	082188	L	O		WASTE PERCHLOROETHYLENE	C S 0 1 U F 0 0 2		
10	18982	092589	L	O		WASTE PERCHLOROETHYLENE	C S 0 1 U F 0 0 2		
	28384	101989	L	O		WASTE PERCHLOROETHYLENE	C S 0 1 U F 0 0 2		
12	30548	111899	L	O		WASTE PERCHLOROETHYLENE	C S 0 1 U F 0 0 2		
13	35243	121589	L	O		WASTE PERCHLOROETHYLENE	C S 0 1 U F 0 0 2		

16. COMMENTS (Enter information by section and/or line number-see instructions)

# FORM 5

I-181-51-1026

28003

No. of W	Amount of Waste	M.C.		
		W	C	M
1	390	P		
2	935	P		
3	600	P		
4	1,075	P		
5	655	P		
6	1,170	P		
7	1,145	P		
8	475	P		
9	965	P		
10	1,340	P		
11	585	P		
12	780	P		
13	1,145	P		
14				
15				

1-181-91

Please print or type. (Form designed for use with (12-Pitch) typewriter.)

Form Approved, OMB No. 2050-0039. Expires 9-30-91

This includes time for reviewing instructions, gathering data, and completing and reviewing the form. Send comments regarding the burden estimates, including suggestions for reducing this burden, to: Chief, Information Policy Branch, RM-223, U.S. Environmental Protection Agency, 401 M Street, SW, Washington, DC 20460; and to the Office of Information and Regulatory Affairs, Office of Management and Budget, Washington, DC 20503.

<b>UNIFORM HAZARDOUS WASTE MANIFEST</b>		1. Generator's US EPA ID No. WA 080023024	Manifest Document No. 41046		2. Page 1 of 1	Information in the shaded areas is not required by Federal law.	
3. Generator's Name and Mailing Address Y MAY MORE CLINCS 2210 S BROTH ST FEDERAL WAY WA 98003-4417				A. State Manifest Document Number			
4. Generator's Phone (206) 296-2369				B. State Generator's ID			
5. Transporter 1 Company Name SAFETY-KLEEN CORP.		6. US EPA ID Number WA 000712059		C. State Transporter's ID			
7. Transporter 2 Company Name		8. US EPA ID Number		D. Transporter's Phone 206 939-2032		E. State Transporter's ID	
9. Designated Facility Name and Site Address SAFETY-KLEEN CORP. 3210 C STREET NE AUBURN, WA 98002				10. US EPA ID Number 1-181-91 UNIT G WA 000712059		F. Transporter's Phone	
				G. State Facility's ID			
				H. Facility's Phone 206 939-2032			
11. US DOT Description (Including Proper Shipping Name, Hazard Class and ID Number)				12. Containers		13. Total Quantity	
RM X HQ WASTE PERCHLOROETHYLENE ORM-A UN1897 (EPA 6002)				No. Type 6 1K		14. Unit Wt/Vol 1170 P	
Waste No. 6002							
d. NOTICE: IN ACCORDANCE WITH 40 CFR 268.7, THE GENERATOR PROVIDES NOTICE THAT THE WASTE DESCRIBED AS 'WASTE PERCHLOROETHYLENE' IS A RESTRICTED WASTE. THE WASTE CONTAINS THE FOLLOWING CONSTITUENT WHOSE TREATMENT STANDARD IS NOT D: TETRACHLOROETHYLENE (CFC-114)							
J. Additional Descriptions for Materials Listed Above				K. Handling Codes for Wastes Listed Above			
15. Special Handling Instructions and Additional Information 9002 12126070 941046 1-181-91-1026 10 IF UNDELIVERABLE, RETURN TO GENERATOR. FOR RECYCLE SKD370 A: 506 B: C: U:							
16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations. If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.							
Printed/Typed Name CARLA BICK				Signature <i>Carla Bick</i>		Date 11/1/90	
17. Transporter 1 Acknowledgement of Receipt of Materials				Signature <i>[Signature]</i>		Date 11/1/90	
Printed/Typed Name E. HOLLINGSWORTH				Signature <i>[Signature]</i>		Date 11/1/90	
18. Transporter 2 Acknowledgement of Receipt of Materials				Signature <i>[Signature]</i>		Date 11/1/90	
Printed/Typed Name				Signature		Date	
19. Discrepancy Indication Space							
20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.							
Printed/Typed Name DAN KIMMEL				Signature <i>[Signature]</i>		Date 11/1/90	

EPA Form 8700-22 (Rev. 8-88) previous editions obsolete

SAFETY-KLEEN CORP.

90290

6

TRANSPORTER #2

INSTRUCTIONS FOR COMPLETION OF THIS FORM. REFER CODE OF FEDERAL REGULATIONS 40 PART 263.20

rec'd 1/6/90

1-181-51

Please print or type. (Form designed for use on elliptical typewriter.)

Form Approved. OMB No. 2050-0039. Expires 9-30-91

reviewing instructions, gathering data, and completing and reviewing the form. Send comments regarding the burden estimate, including suggestions for reducing this burden, to: Chief, Information Policy Branch, PM-223, U.S. Environmental Protection Agency, 401 M Street, SW, Washington, DC 20460; and to the Office of Information and Regulatory Affairs, Office of Management and Budget, Washington, DC 20503.

<b>UNIFORM HAZARDOUS WASTE MANIFEST</b>		1. Generator's US EPA ID No. WA000003004		Manifest Document No. 00497		2. Page 1 of 1		Information in the shaded areas is not required by Federal law.		
3. Generator's Name and Mailing Address Y PAY MORE CLUBS 2210 S 320TH ST FEDERAL WAY WA 98003-0417						A. State Manifest Document Number				
4. Generator's Phone (206) 946-3369						B. State Generator's ID				
5. Transporter 1 Company Name SAFETY-KLEEN CORP.			6. US EPA ID Number WA000713089			C. State Transporter's ID				
7. Transporter 2 Company Name			8. US EPA ID Number			D. Transporter's Phone 206 939-2022				
9. Designated Facility Name and Site Address SAFETY-KLEEN CORP. 3210 C STREET NE AUBURN, WA 98002			10. US EPA ID Number 1-181-51 UNIT 0 WA000713089			E. State Transporter's ID				
						F. Transporter's Phone				
						G. State Facility's ID				
						H. Facility's Phone 206 939-2022				
11. US DOT Description (Including Proper Shipping Name, Hazard Class and ID Number)						12. Containers		13. Total Quantity	14. Unit Wt/Vol	15. Waste No.
a. X RM WASTE PERCHLOROETHYLENE ORM-A NA1897 (F002) (HAQ #74)						8 DM		560	P	F002
b.										
c.										
d. NOTICE: IN ACCORDANCE WITH 40 CFR 268.7, THE GENERATOR PROVIDES NOTICE THAT THE WASTE DESCRIBED AS "WASTE PERCHLOROETHYLENE" IS A RESTRICTED WASTE. THE WASTE CONTAINS THE FOLLOWING CONSTITUENT WHOSE TREATMENT STANDARDS ARE NOTED: TETRACHLOROETHYLENE (0.05 WPM)										
J. Additional Descriptions for Materials Listed Above						K. Handling Codes for Wastes Listed Above				
15. Special Handling Instructions and Additional Information IF UNDELIVERABLE, RETURN TO GENERATOR/FOR RECYCLE EMERGENCY RESP# 1-700-888-4680 0080 22007199 008497 1-181-51-1026 10										
16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations. If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.										
Printed/Typed Name SOO K CHANG				Signature <i>[Signature]</i>		Date 12/13/90				
17. Transporter 1 Acknowledgement of Receipt of Materials						Date 12/13/90				
Printed/Typed Name E HOLLINGSWORTH				Signature <i>[Signature]</i>		Date 12/13/90				
18. Transporter 2 Acknowledgement of Receipt of Materials						Date				
Printed/Typed Name				Signature		Date				
19. Discrepancy Indication Space										
20. Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except as noted in Item 10.										
Printed/Typed Name Honny Chock				Signature <i>[Signature]</i>		Date 1/21/90				

I am voluntarily providing you with this information for your use in carrying out your duties. This information is not to be used for any other purpose. If you are a contractor, please print or type your name and address on the back of this form. Send comments regarding the burden estimate, including suggestions for reducing this burden, to: Chief, Information Policy Branch, PM-223, U.S. Environmental Protection Agency, 401 M Street, SW, Washington, DC 20460; and to the Office of Information and Regulatory Affairs, Office of Management and Budget, Washington, DC 20503.

<b>UNIFORM HAZARDOUS WASTE MANIFEST</b>		1. Generator's US EPA ID No. MA 960503004	Manifest Document No. 49500		2. Page 1 of 1	Information in the shaded areas is not required by Federal law.			
3. Generator's Name and Mailing Address PAY MORE CLERS 2210 S 320TH ST FEDERAL WAY MA 00033-0417					A. State Manifest Document Number				
4. Generator's Phone (206) 948-2389					B. State Generator's ID				
5. Transporter 1 Company Name SAFETY-KLEEN CORP.			6. US EPA ID Number MA 000712059		C. State Transporter's ID				
7. Transporter 2 Company Name			8. US EPA ID Number		D. Transporter's Phone (206) 939-2022				
9. Designated Facility Name and Site Address SAFETY-KLEEN CORP. 3210 C STREET NE AUBURN, MA 00002			10. US EPA ID Number 1-101-51 UNIT G MA 000712059		E. State Transporter's ID				
					F. Transporter's Phone				
					G. State Facility's ID				
					H. Facility's Phone 206 939-2022				
11. US DOT Description (Including Proper Shipping Name, Hazard Class and ID Number)						12. Containers	13. Total Quantity	14. Unit Wt/Vol	15. Waste No.
a. <input checked="" type="checkbox"/> HM 20 WASTE PERCHLOROETHYLENE ORN-A NA1897 (P002) (ERG 474)						4 DF	780		P002
b.									
c.									
d. NOTICE: IN ACCORDANCE WITH 40 CFR 268.7, THE GENERATOR PROVIDES NOTICE THAT THE WASTE DESCRIBED AS "WASTE PERCHLOROETHYLENE" IS A RESTRICTED WASTE. THE WASTE CONTAINS THE FOLLOWING CONSTITUENT WHOSE TREATMENT STANDARD IS NOTED: TETRACHLOROETHYLENE, 0.05 PPM.									
j. Additional Descriptions for Materials Listed Above						k. Handling Codes for Wastes Listed Above			
15. Special Handling Instructions and Additional Information 9046 21151469 649580 1-101-51-1026 10 IF UNDELIVERABLE, RETURN TO GENERATOR/FOR RECYCLE EMERGENCY RESP#1-700-802-4660 500TH A2 505 B2 C3 D1									
16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations. If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.									
Printed/Typed Name 500 K CHANLEY					Signature 			Date 11/13/90	
17. Transporter 1 Acknowledgement of Receipt of Materials									
Printed/Typed Name E. C. HOLLINGSWORTH					Signature 			Date 11/13/90	
18. Transporter 2 Acknowledgement of Receipt of Materials									
Printed/Typed Name					Signature			Date	
19. Discrepancy Indication Space									
20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.									
Printed/Typed Name Henry Chock					Signature 			Date 11/13/90	

Public reporting burden for this collection of information is estimated to average 37 minutes for generators, 15 minutes for transporters, and 10 minutes for treatment, storage and disposal facilities. This includes time for reviewing instructions, gathering data, and completing and reviewing the form. Send comments regarding the burden estimate, including suggestions for reducing this burden, to: Chief, Information Policy Branch, PM-223, U.S. Environmental Protection Agency, 401 M Street, SW, Washington, DC 20460; and to the Office of Information and Regulatory Affairs, Office of Management and Budget, Washington, DC 20503.

<b>UNIFORM HAZARDOUS WASTE MANIFEST</b>		1. Generator's US EPA ID No. WAD 980943094		Manifest Document No. 3074		2. Page 1 of 1		Information in the shaded areas is not required by Federal law.	
3. Generator's Name and Mailing Address Y PAY MORE CLNRS 2210 S 320TH ST FEDERAL WAY WA 98003-5417						A. State Manifest Document Number		B. State Generator's ID	
4. Generator's Phone (206) 446-2373				6. US EPA ID Number		C. State Transporter's ID		D. Transporter's Phone 206 939-2022	
5. Transporter 1 Company Name SAFETY-KLEEN CORP.				8. US EPA ID Number		E. State Transporter's ID		F. Transporter's Phone	
7. Transporter 2 Company Name				10. US EPA ID Number		G. State Facility's ID		H. Facility's Phone 206 939-2022	
9. Designated Facility Name and Site Address SAFETY-KLEEN CORP. 3210 C STREET, NE AUBURN, WA 98002				11. US DOT Description (Including Proper Shipping Name, Hazard Class and ID Number)		12. Containers		13. Total Quantity	
HM		No.		Type		14. Unit WU/Vol		15. Waste No.	
a.		X		RA WASTE PERCHLOROETHYLENE ORM-A NA1897 (F002)(ERG #74)		5 DF		975 P F002	
b.		X		RA WASTE PERCHLOROETHYLENE ORM A NA1897 F002 ERG#74		8 DM		560 P F002	
c.									
d.				NOTICE: IN ACCORDANCE WITH 40 CFR 268.7, THE GENERATOR PROVIDES NOTICE THAT THE WASTE DESCRIBED AS 'WASTE PERCHLOROETHYLENE' IS A RESTRICTED WASTE. THE WASTE CONTAINS THE FOLLOWING CONSTITUENT WHOSE TREATMENT STANDARD IS NOTED: TETRACHLOROETHYLENE (CFC-114)					
J. Additional Descriptions for Materials Listed Above						K. Handling Codes for Wastes Listed Above			
15. Special Handling Instructions and Additional Information 9042 20306064 303074 1-181-51-1028 10 IF UNDELIVERABLE, RETURN TO GENERATOR/FOR RECYCLE EMERGENCY RESP#1-708-800-4660 SKDOT# A: 606 B: 506 C: D:									
16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations. If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.									
Printed/Typed Name GEO K CHANG				Signature 				Date 10/16/90	
17. Transporter 1 Acknowledgement of Receipt of Materials									
Printed/Typed Name F HOLLINGSWORTH				Signature 				Date 10/16/90	
18. Transporter 2 Acknowledgement of Receipt of Materials									
Printed/Typed Name				Signature				Date	
19. Discrepancy Indication Space									
20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.									
Printed/Typed Name Henry Chao				Signature 				Date 11/16/90	

Reviewing instructions, gathering data, and completing and reviewing the form. Send comments regarding the burden estimate, including suggestions for reducing this burden, to: Chief, Information Policy Branch, PM-223, U.S. Environmental Protection Agency, 401 M Street, SW, Washington, DC 20460; and to the Office of Information and Regulatory Affairs, Office of Management and Budget, Washington, DC 20503.

<b>UNIFORM HAZARDOUS WASTE MANIFEST</b>		1. Generator's US EPA ID No. WAD 980983084		Manifest Document No. 31317		2. Page 1 of 1		Information in the shaded areas is not required by Federal law.			
3. Generator's Name and Mailing Address Y PAY MORE CLNRG 2210 S 320TH ST FEDERAL WAY WA 98003-6417						A. State Manifest Document Number					
4. Generator's Phone (206) 946-2369						B. State Generator's ID					
5. Transporter 1 Company Name SAFETY-KLEEN CORP.			6. US EPA ID Number WAD 000712059			C. State Transporter's ID					
7. Transporter 2 Company Name			8. US EPA ID Number			D. Transporter's Phone 206 939-2022					
9. Designated Facility Name and Site Address SAFETY-KLEEN CORP. 3210 C STREET NE AUBURN, WA 98002			10. US EPA ID Number 1-181-81 UNIT G WAD 000712059			E. State Transporter's ID					
						F. Transporter's Phone					
						G. State Facility's ID					
						H. Facility's Phone 206 939-2022					
11. US DOT Description (Including Proper Shipping Name, Hazard Class and ID Number)						12. Containers		13. Total Quantity	14. Unit Wt/Vol	15. Waste No.	
a. X RM WASTE PERCHLOROETHYLENE URN-A NA1897 (P002)(ERG #74)						3 DF		585	P	P002	
b.											
c.											
d. NOTICE: IN ACCORDANCE WITH 40 CFR 268.7, THE GENERATOR PROVIDES NOTICE THAT THE WASTE DESCRIBED AS WASTE PERCHLOROETHYLENE IS A RESTRICTED WASTE. THE WASTE CONTAINS THE FOLLOWING CONSTITUENT WHOSE TREATMENT STANDARD IS NOYED1 TETRACHLOROETHYLENE(10.0% PPM).											
J. Additional Descriptions for Materials Listed Above						K. Handling Codes for Wastes Listed Above					
15. Special Handling Instructions and Additional Information 9038 19457961 931317 1-181-81-1026 10 IF UNDELIVERABLE, RETURN TO GENERATOR/FOR RECYCLE EMERGENCY RESP#1-708-880-6660 SKD02# A: 506 D: C: D:											
16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable International and national government regulations. If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.						Printed/Typed Name Soo K CHANG		Signature <i>[Signature]</i>		Date 09/21/90	
17. Transporter 1 Acknowledgement of Receipt of Materials						Printed/Typed Name E C HOLLYN'S SWORTH		Signature <i>[Signature]</i>		Date 09/21/90	
18. Transporter 2 Acknowledgement of Receipt of Materials						Printed/Typed Name		Signature		Date	
19. Discrepancy Indication Space											
20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.						Printed/Typed Name Leslie C. Wash		Signature <i>[Signature]</i>		Date 10/12/190	

Please print or type. (Form designed for use on ( .2-pt)ch) typewriter.)

<b>UNIFORM HAZARDOUS WASTE MANIFEST</b>		1. Generator's US EPA ID No. WA0 980903094		Manifest Document No. 81638		2. Page 1 of 1		Information in the shaded areas is not required by Federal law.		
3. Generator's Name and Mailing Address Y FAY MORE CLANS 2210 S 320TH ST FEDERAL WAY WA 98003-5417						A. State Manifest Document Number				
4. Generator's Phone (206)946-2369						B. State Generator's ID				
5. Transporter 1 Company Name SAFETY-KLEEN CORP.			6. US EPA ID Number WA0 000712059			C. State Transporter's ID				
7. Transporter 2 Company Name			8. US EPA ID Number			D. Transporter's Phone 206 939-2022				
9. Designated Facility Name and Site Address SAFETY-KLEEN CORP. 3210 C STREET NE AUBURN, WA 98002			10. US EPA ID Number 1-101-51 UNIT G WA0 000712059			E. State Transporter's ID				
						F. Transporter's Phone				
						G. State Facility's ID				
						H. Facility's Phone 206 939-2022				
11. US DOT Description (Including Proper Shipping Name, Hazard Class and ID Number)						12. Containers No. Type		13. Total Quantity	14. Unit Wt/Vol	Waste No.
a. X RM WASTE PERCHLOROETHYLENE ORM-A NA1897 (F002) (ERG 8741)						8 DM 560		P	P	F002
b. X RM WASTE PERCHLOROETHYLENE ORM A NA1897 F002 ERG #74						2 DF 390		P	P	F002
c.										
d. NOTICE: IN ACCORDANCE WITH 40 CFR 268.7, THE GENERATOR PROVIDES NOTICE THAT THE WASTE DESCRIBED AS WASTE PERCHLOROETHYLENE IS A RESTRICTED WASTE. THE WASTE CONTAINS THE FOLLOWING CONSTITUENT WHOSE TREATMENT STANDARD IS NOTED TETRACHLOROETHYLENE 10.05 PPM										
J. Additional Descriptions for Materials Listed Above						K. Handling Codes for Wastes Listed Above				
15. Special Handling Instructions and Additional Information 9034 10687916 581628 1-101-51-1026 10 IF UNDETERMINABLE, RETURN TO GENERATOR/FOR RECYCLE EMERGENCY RESP#1-708-888-4660 SK0078 01 506 01 50602 01										
16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations. If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.						Printed/Typed Name GEOFF K CHANLEY		Signature 		Date 08/22/90
17. Transporter 1 Acknowledgement of Receipt of Materials						Printed/Typed Name E C HOLLINGSWORTH		Signature 		Date 08/22/90
18. Transporter 2 Acknowledgement of Receipt of Materials						Printed/Typed Name		Signature		Date
19. Discrepancy Indication Space										
20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.						Printed/Typed Name Henry Chock		Signature 		Date 18 22 190

Please print or type. (Form designed for use on all 7-pitch typewriter.)

Form Approved. OMB No. 2050-0039. Expires 9-30-91

reviewing instructions, gathering data, and completing and reviewing the form. Send comments regarding the burden estimate, including suggestions for reducing this burden, to: Chief, Information Policy Branch, PM-223, U.S. Environmental Protection Agency, 401 M Street, SW, Washington, DC 20460; and to the Office of Information and Regulatory Affairs, Office of Management and Budget, Washington, DC 20503.

<b>UNIFORM HAZARDOUS WASTE MANIFEST</b>		1. Generator's US EPA ID No. WA0980030004	Manifest Document No. 25717		2. Page 1 of 1	Information in the shaded areas is not required by Federal law.		
3. Generator's Name and Mailing Address Y PAV MORE CLNNS 3210 C STREET NE FEDERAL WAY AUGURN, WA 98003-5417					A. State/Manifest Document Number			
4. Generator's Phone (206) 946-2369					B. State/Generator's ID			
5. Transporter 1 Company Name SAFETY-KLEEN CORP.			6. US EPA ID Number WA0900712059		C. State/Transporter's ID			
7. Transporter 2 Company Name			8. US EPA ID Number		D. Transporter's Phone (206) 989-2022			
9. Designated Facility Name and Site Address SAFETY-KLEEN CORP. 3210 C STREET NE AUGURN, WA 98002			10. US EPA ID Number 1-181-51 UNIT C WA0900712059		E. State/Transporter's ID			
					F. Transporter's Phone			
					G. State/Facility's ID			
					H. Facility's Phone 206 989-2022			
11. US DOT Description (Including Proper Shipping Name, Hazard Class and ID Number)					12. Containers No.	13. Total Quantity	14. Unit Wt/Vol	15. Waste No.
a. RM X RG WASTE PERCHLOROETHYLENE ORCA NA1897 (F002) (ERG #74)					5	DF	975	FAWA
b.								
c.								
d. NOTICE: IN ACCORDANCE WITH 40 CFR 260.7, THE GENERATOR PROVIDES NOTICE THAT THE WASTE DESCRIBED AS "WASTE PERCHLOROETHYLENE" IS A RESTRICTED WASTE. THE WASTE CONTAINS THE FOLLOWING CONSTITUENT WHOSE THREAT STANDARD IS NOTED: TETRACHLOROETHYLENE, 0.5% OR MORE.					K. Handling Codes for Wastes Listed/Above			
16. Special Handling Instructions and Additional Information IF UNDELIVERABLE, RETURN TO GENERATOR/FOR RECYCLE EMERGENCY RESP# 1-708-888-4660 9030 17790247 228717 1-181-51-1026 10 SKOVN A: 500 B: C: D:								
16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations. If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.								
Printed/Typed Name Soo K CHANG					Signature <i>[Signature]</i>		Date 05/10/90	
17. Transporter 1 Acknowledgement of Receipt of Materials					Signature <i>[Signature]</i>		Date 08/1/90	
Printed/Typed Name E C HOLLINGSWORTH					Signature <i>[Signature]</i>		Date	
18. Transporter 2 Acknowledgement of Receipt of Materials					Signature		Date	
Printed/Typed Name					Signature		Date	
19. Discrepancy Indication Space								
20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in item 19.								
Printed/Typed Name KESU C WASH					Signature <i>[Signature]</i>		Date 08/10/90	

reviewing instructions, gathering data, and completing and reviewing the form. Send comments regarding the burden estimate, including suggestions for reducing this burden, to: Chief, Information Policy Branch, PM-223, U.S. Environmental Protection Agency, 401 M Street, SW, Washington, DC 20460; and to the Office of Information and Regulatory Affairs, Office of Management and Budget, Washington, DC 20503.

<b>UNIFORM HAZARDOUS WASTE MANIFEST</b>		1. Generator's US EPA ID No. WA0 980983004	Manifest Document No. 73890		2. Page 1 of 1	Information in the shaded areas is not required by Federal law.		
3. Generator's Name and Mailing Address V PAY MORE CLEAN 2210 S 320TH ST FEDERAL WAY WA 98003-5417					A. State/Manifest Document Number			
4. Generator's Phone (206) 946-2369					B. State/Generator's ID			
5. Transporter 1 Company Name SAFETY-KLEEN CORP.			6. US EPA ID Number WA0 000712059		C. State/Transporter's ID			
7. Transporter 2 Company Name			8. US EPA ID Number		D. Transporter's Phone (206) 949-3022			
9. Designated Facility Name and Site Address SAFETY-KLEEN CORP. 3210 C STREET NE AUBURN, WA 98002			10. US EPA ID Number 1-181-51 UNIT 6 WA0 000712059		E. State/Transporter's ID			
					F. Transporter's Phone			
					G. State/Facility's ID			
					H. Facility's Phone (206) 949-3022			
11. US DOT Description (Including Proper Shipping Name, Hazard Class and ID Number)					12. Containers No.	13. Total Quantity	14. Unit Wt/Vol	Waste No.
a. RM WASTE PERCHLOROETHYLENE UNR-A NA1897 (P002) (ERG #74)					4 DM	280	P	P002
b. RW WASTE PERCHLOROETHYLENE ORR A NA1897 P002 ERG #74					1 DF	780	P	P002
c.								
d. NOTICE: IN ACCORDANCE WITH 40 CFR 268.7, THE GENERATOR PROVIDES NOTICE THAT THE WASTE DESCRIBED AS "WASTE PERCHLOROETHYLENE" IS A RESTRICTED WASTE. THE WASTE CONTAINS THE FOLLOWING CONSTITUENT WHOSE TREATMENT STANDARD IS NOTED: TETRACHLOROETHYLENE 0.05 PPM.								
J. Additional Descriptions for Materials Listed Above					K. Handling Codes for Wastes Listed Above			
15. Special Handling Instructions and Additional Information IF UNDELIVERABLE, RETURN TO GENERATOR/FOR RECYCLE EMERGENCY RESP# 1-708-888-4660 SKUOTW AI 506 01 50601 D1					9026 16050943 873890 1-181-51-1026 10			
16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations. If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.					Date			
Printed/Typed Name Soo K CHANG			Signature <i>[Signature]</i>		Month Day Year 06/25/90			
17. Transporter 1 Acknowledgement of Receipt of Materials					Date			
Printed/Typed Name E C HOLLINGSWORTH			Signature <i>[Signature]</i>		Month Day Year 06/25/90			
18. Transporter 2 Acknowledgement of Receipt of Materials					Date			
Printed/Typed Name			Signature		Month Day Year			
19. Discrepancy Indication Space								
20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.					Date			
Printed/Typed Name Henry Chock			Signature <i>[Signature]</i>		Month Day Year 06/25/90			

reviewing instructions, gathering data, and completing and reviewing the form. Send comments regarding the burden estimate, including suggestions for reducing this burden, to: Chief, Information Policy Branch, PM-223, U.S. Environmental Protection Agency, 401 M Street, SW, Washington, DC 20460; and to the Office of Information and Regulatory Affairs, Office of Management and Budget, Washington, DC 20503.

1-181-91

Please print or type. (Form designed for use on electric typewriter.)

Form Approved. OMB No. 2050-0039; Expires 9-30-91

<b>UNIFORM HAZARDOUS WASTE MANIFEST</b>		1. Generator's US EPA ID No. WAD 980983084	Manifest Document No. 11207	2. Page 1 of 1	Information in the shaded areas is not required by Federal law.
3. Generator's Name and Mailing Address Y PAY MORE CLNAS 2210 S 320TH ST FEDERAL WAY WA 98003-5617				A. State Manifest Document Number	
4. Generator's Phone (206) 946-2359				B. State Generator's ID	
5. Transporter 1 Company Name SAFETY-KLEEN CORP.		6. US EPA ID Number WAD 000712089		C. State Transporter's ID	
7. Transporter 2 Company Name		8. US EPA ID Number		D. Transporter's Phone 206-939-2022	
9. Designated Facility Name and Site Address SAFETY-KLEEN CORP. 3210 C STREET NE AUBURN, WA 98002		10. US EPA ID Number 1-181-91 UNIT G WAD 000712089		E. State Transporter's ID	
				F. Transporter's Phone	
				G. State Facility's ID	
				H. Facility's Phone 206-939-2022	
11. US DOT Description (Including Proper Shipping Name, Hazard Class and ID Number)				12. Containers No.	13. Total Quantity
a. <input checked="" type="checkbox"/> RM RQ WASTE PERCHLOROETHYLENE ORM-A NA1897 (P002) (ERG #74)				4 DM	240
b. <input checked="" type="checkbox"/> RQ WASTE PERCHLOROETHYLENE ORM-A NA1897 (P002) (ERG #74)				5 DX	975
c.					
d. NOTICE: IN ACCORDANCE WITH 40 CFR 268.7, THE GENERATOR PROVIDES NOTICE THAT THE WASTE DESCRIBED AS "WASTE PERCHLOROETHYLENE" IS A RESTRICTED WASTE. THE WASTE CONTAINS THE FOLLOWING CONSTITUENT WHOSE TREATMENT STANDARD IS NOTED: TETRACHLOROETHYLENE 10.05 PPM				I. Waste No. P002	
J. Additional Descriptions for Materials Listed Above				K. Handling Codes for Wastes Listed Above	
15. Special Handling Instructions and Additional Information 9022 16062010 811207 1-181-91-1026 10 IF UNDETERMINABLE, RETURN TO GENERATOR/FOR RECYCLE EMERGENCY RESP# 1-708-888-4660 SKD078 A: 808 B: 50603 02					
16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations. If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.					
Printed/Typed Name GEOFF CUMMINGS				Signature 	
17. Transporter 1 Acknowledgement of Receipt of Materials				Date 5/29/90	
Printed/Typed Name E. C. HILLIS SWARTZ				Signature 	
18. Transporter 2 Acknowledgement of Receipt of Materials				Date 05/29/90	
Printed/Typed Name				Signature	
19. Discrepancy Indication Space					
20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.					
Printed/Typed Name Henry Chock				Signature 	
				Date 10/29/90	

1-181-51

Please print or type. (Form designed for use of (12-pitch) typewriter.)

Form Approved. OMB No. 2050-0039; Expires 9-30-91

Public reporting burden for this collection of information is estimated to average 37 minutes per response, including the time for reviewing instructions, gathering data, and completing and reviewing the form. Send comments regarding this burden estimate, including suggestions for reducing this burden, to: Chief, Information Policy Branch, PM-223, U.S. Environmental Protection Agency, 401 M Street, SW, Washington, DC 20460; and to the Office of Information and Regulatory Affairs, Office of Management and Budget, Washington, DC 20503.

<b>UNIFORM HAZARDOUS WASTE MANIFEST</b>		1. Generator's US EPA ID No. WAD 980993084		Manifest Document No. 73944		2. Page 1 of 1		Information in the shaded areas is not required by Federal law.					
3. Generator's Name and Mailing Address Y PAY MORE CLNRS 2310 S 320TH ST FEDERAL WAY WA 98003-5417						A. State Manifest Document Number							
4. Generator's Phone (206) 946-2369						B. State Generator's ID							
6. Transporter 1 Company Name SAFETY-KLEEN CORP.				8. US EPA ID Number WAD 000712059		C. State Transporter's ID							
7. Transporter 2 Company Name				8. US EPA ID Number		D. Transporter's Phone 206 939-2022							
9. Designated Facility Name and Site Address SAFETY-KLEEN CORP. 3210 C STREET NE AUBURN, WA 98002						10. US EPA ID Number 1-181-51 UNIT C WAD 000712059		E. State Transporter's ID					
						F. Transporter's Phone							
						G. State Facility's ID							
						H. Facility's Phone 206 939-2022							
11. US DOT Description (Including Proper Shipping Name, Hazard Class and ID Number)						12. Containers		13. Total Quantity		14. Unit Wt/Vol		15. Waste No.	
a. X RM-WASTE PERCHLOROETHYLENE ORM-A NA1897 (F002) (ERG #74)						3 DF		585 P				F002	
b. K RM-WASTE PERCHLOROETHYLENE ORM-A NA1897 F002 ERG #74						8 DM		480 P				F002	
c.													
d. NOTICE: IN ACCORDANCE WITH 40 CFR 268.7, THE GENERATOR PROVIDES NOTICE THAT THE WASTE DESCRIBED AS 'WASTE PERCHLOROETHYLENE' IS A RESTRICTED WASTE. THE WASTE CONTAINS THE FOLLOWING CONSTITUENT WHOSE TREATMENT STANDARD IS NOTED: TETRACHLOROETHYLENE (0.08 PPH).													
J. Additional Descriptions for Materials Listed Above						K. Handling Codes for Wastes Listed Above							
16. Special Handling Instructions and Additional Information IF UNDELIVERABLE, RETURN TO GENERATOR/FOR RECYCLE EMERGENCY RESP# 1-706-888-4660 SKDOTE A: 606 B: 506 C: D:						9018 15249998 173944 1-181-51-1026 10							
16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations. If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.													
Printed/Typed Name BARBARA DENNEY						Signature Barbara Denney		Date 5/1/90					
17. Transporter 1 Acknowledgement of Receipt of Materials						Printed/Typed Name E C HOLLINGSWORTH		Signature		Date 05/01/90			
18. Transporter 2 Acknowledgement of Receipt of Materials						Printed/Typed Name		Signature		Date			
19. Discrepancy Indication Space													
20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.						Printed/Typed Name Jesse O. Nash		Signature Jesse O. Nash		Date 1/6/90			

Public reporting burden for this collection of information is estimated to average 37 minutes for generators, 15 minutes for transporters, 15 minutes for treatment, storage and disposal facilities. This includes time for reviewing instructions, gathering data, and completing and reviewing the form. Send comments regarding the burden estimate, including suggestions for reducing this burden, to: Chief, Information Policy Branch, PM-223, U.S. Environmental Protection Agency, 401 M Street, SW, Washington, DC 20460; and to the Office of Information and Regulatory Affairs, Office of Management and Budget, Washington, DC 20503.

<b>UNIFORM HAZARDOUS WASTE MANIFEST</b>		1. Generator's US EPA ID No. WA 980983084	Manifest Document No. 83191		2. Page 1 of 1	Information in the shaded areas is not required by Federal law.			
3. Generator's Name and Mailing Address Y PAY MORE CLNRS 2210 S 320TH ST FEDERAL WAY WA 98003-5417					A. State Manifest Document Number				
4. Generator's Phone (206) 948-2369					B. State Generator's ID				
5. Transporter 1 Company Name SAFETY-KLEEN CORP.			6. US EPA ID Number WA 000712059		C. State Transporter's ID				
7. Transporter 2 Company Name			8. US EPA ID Number		D. Transporter's Phone 206-939-2022				
9. Designated Facility Name and Site Address SAFETY-KLEEN CORP. 3210 C STREET NW AUBURN, WA 98002					E. State Transporter's ID				
10. US EPA ID Number 1-101-51 UNIT G WA 000712059					F. Transporter's Phone				
					G. State Facility's ID				
					H. Facility's Phone 206-939-2022				
11. US DOT Description (Including Proper Shipping Name, Hazard Class and ID Number)					12. Containers		13. Total Quantity	14. Unit Wt/Vol	15. Waste No.
a. HM X RQ WASTE PERCHLOROETHYLENE ORM-A HAZ97 (P002)(ERG #74)					S DA 975 <sup>P</sup>				F002
b.									
c.									
d. NOTICE: IN ACCORDANCE WITH 40 CFR 268.47, THE GENERATOR PROVIDES NOTICE THAT THE WASTE DESCRIBED AS "WASTE PERCHLOROETHYLENE" IS A RESTRICTED WASTE. THE WASTE CONTAINS THE FOLLOWING CONSTITUENT WHOSE TREATMENT STANDARD IS NOTED: TETRACHLOROETHYLENE (0.06 PPM)									
J. Additional Descriptions for Materials Listed Above					K. Handling Codes for Wastes Listed Above				
15. Special Handling Instructions and Additional Information IF UNDELETABLE, RETURN TO GENERATOR. FOR RECYCLE, EMERGENCY RESP #1-700-860-4660 SKDTR A1 SOG B1 CC D1					9014 14466916 863191 1-101-51-1026 10				
16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations. If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.					Printed/Typed Name FAE KAHLER		Signature FAE Kahler		Date 3/14/90
17. Transporter 1 Acknowledgement of Receipt of Materials					Printed/Typed Name E WOLWESWORTH		Signature		Date 090490
18. Transporter 2 Acknowledgement of Receipt of Materials					Printed/Typed Name		Signature		Date
19. Discrepancy Indication Space									
20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.					Printed/Typed Name Leslie A. West		Signature Leslie A. West		Date 12/14/90

Please print or type. (Form designed for use on a (pitch) typewriter.)

Form Approved. OMB No. 2050-0039. Expires 9-30-91

reviewing instructions, gathering data, and completing and reviewing the form. Send comments regarding the burden estimate, including suggestions for reducing this burden, to: Chief, Information Policy Branch, PM-2234, U.S. Environmental Protection Agency, 401 M Street, SW, Washington, DC 20460; and to the Office of Information and Regulatory Affairs, Office of Management and Budget, Washington, DC 20503.

<b>UNIFORM HAZARDOUS WASTE MANIFEST</b>		1. Generator's US EPA ID No. WA0980983084	Manifest Document No. 55007		2. Page 1 of 1	Information in the shaded areas is not required by Federal law.			
3. Generator's Name and Mailing Address Y PAY MORE CLNR 2210 S 320TH ST FEDERAL WAY WA 98003-5617					A. State Manifest Document Number				
4. Generator's Phone (206) 946-2369					B. State Generator's ID				
5. Transporter 1 Company Name SAFETY-KLEEN CORP.			6. US EPA ID Number WA0900712059		C. State Transporter's ID				
7. Transporter 2 Company Name			8. US EPA ID Number		D. Transporter's Phone (206) 939-2022				
9. Designated Facility Name and Site Address SAFETY-KLEEN CORP. 3210 C STREET NE AUBURN, WA 98002			10. US EPA ID Number 1-121-51 UNIT G WA0900712059		E. State Transporter's ID				
					F. Transporter's Phone				
					G. State Facility's ID				
					H. Facility's Phone 206 939-2022				
11. US DOT Description (Including Proper Shipping Name, Hazard Class and ID Number)					12. Containers		13. Total Quantity	14. Unit Wt/Vol	15. Waste No.
a. RM WASTE MERCURIOETHYLENE ORG-A NA1007 (1002) (ERG #74)					4 DM		750	P	F002
b. RM WASTE MERCURIOETHYLENE ORG-A NA1007 (1002) (ERG #74)					8 DM		170	P	F002
c.									
d. NOTICE: IN ACCORDANCE WITH 40 CFR 264.7, THE GENERATOR PROVIDES NOTICE THAT THE WASTE DESCRIBED AS WASTE MERCURIOETHYLENE IS A RESTRICTED WASTE. THE WASTE CONTAINS THE FOLLOWING CONSTITUENT WHOSE TREATMENT					K. Handling Codes for Wastes Listed Above				
J. Additional Descriptions for Materials Listed Above									
15. Special Handling Instructions and Additional Information IF UNDELIVERABLE, RETURN TO GENERATOR. FOR RECYCLE EMERGENCY DESP#1-700-888-3800H A: 506 B: 506 C: 506 D:					2010 11704986 55007 1-121-51-1026 10				
16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable International and national government regulations. If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.					Date				
Printed/Typed Name [Signature]			Signature [Signature]		Month Day Year 3 7 90				
17. Transporter 1 Acknowledgement of Receipt of Materials					Date				
Printed/Typed Name E C HOLUNKSWORD			Signature [Signature]		Month Day Year 03 07 90				
18. Transporter 2 Acknowledgement of Receipt of Materials					Date				
Printed/Typed Name			Signature		Month Day Year				
19. Discrepancy Indication Space									
20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.					Date				
Printed/Typed Name [Signature]			Signature [Signature]		Month Day Year 12 07 90				

Please print or type. (Form designed for use on a dot-matrix typewriter.)

Form Approved, OMB No. 2050-0039, Expires 9-30-91

Review instructions, gathering data, and completing and reviewing the form. Send comments regarding the burden estimate, including suggestions for reducing this burden, to: Chief, Information Policy Branch, PM-223, U.S. Environmental Protection Agency, 401 M Street, SW, Washington, DC 20460; and to the Office of Information and Regulatory Affairs, Office of Management and Budget, Washington, DC 20503.

<b>UNIFORM HAZARDOUS WASTE MANIFEST</b>		1. Generator's US EPA ID No. WAD 980983084		Manifest Document No. 46528		2. Page 1 of 1		Information in the shaded areas is not required by Federal law.						
3. Generator's Name and Mailing Address Y PAY MORE CLNRS 2210 S 320TH ST FEDERAL WAY WA 98003-5417						A. State Manifest Document Number								
4. Generator's Phone (206) 946-2369						B. State Generator's ID								
5. Transporter 1 Company Name SAFETY-KLEEN CORP.				6. US EPA ID Number WAD 000712059		C. State Transporter's ID								
7. Transporter 2 Company Name						D. Transporter's Phone 206-939-2023								
8. US EPA ID Number						E. State Transporter's ID								
9. Designated Facility Name and Site Address SAFETY-KLEEN CORP. 3210 C STREET NE AUBURN, WA 98002						10. US EPA ID Number 1-181-51 UNIT C WAD 000712059								
11. US DOT Description (including Proper Shipping Name, Hazard Class and ID Number)						12. Containers No. Type		13. Total Quantity		14. Unit Wt/Vol		15. Waste No		
a. X RM-WASTE PERCHLOROETHYLENE ORM-A NA1897 (F002) (ERG #74)						4 DF		780		P.		F002		
b.														
c.														
d. NOTICE: IN ACCORDANCE WITH 40 CFR 268.7, THE GENERATOR PROVIDES NOTICE THAT THE WASTE DESCRIBED AS 'WASTE PERCHLOROETHYLENE' IS A RESTRICTED WASTE. THE WASTE CONTAINS THE FOLLOWING CONSTITUENT WHOSE TREATMENT STANDARD IS NEEDED: TETRACHLOROETHYLENE (0.05 PPM)						NOTICE								
J. Additional Descriptions for Materials Listed Above						K. Handling Codes for Wastes Listed Above								
15. Special Handling Instructions and Additional Information 9006 12913497 246528 1-181-51-1026 10 IF UNDELIVERABLE, RETURN TO GENERATOR. FOR RECYCLE														
16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations. If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.														
Printed/Typed Name FAE KAHLER						Signature [Signature]			Date 2/6/90					
17. Transporter 1 Acknowledgement of Receipt of Materials						Printed/Typed Name E. HOLLINGSWORTH			Signature [Signature]			Date 02/10/90		
18. Transporter 2 Acknowledgement of Receipt of Materials						Printed/Typed Name			Signature			Date		
19. Discrepancy Indication Space														
20. Facility Owner or Operator; Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.														
Printed/Typed Name DAN KINTZEL						Signature [Signature]			Date 02/06/90					

Please print or type. (Form designed for use on a 3-pitch typewriter.)

Form Approved. OMB No. 2050-0039. Expires 9-30-91

reviewing instructions, gathering data, and completing and reviewing the form. Send comments regarding the burden estimate, including suggestions for reducing this burden, to: Chief, Information Policy Branch, PM-223, U.S. Environmental Protection Agency, 401 M Street, SW, Washington, DC 20460; and to the Office of Information and Regulatory Affairs, Office of Management and Budget, Washington, DC 20503.

<b>UNIFORM HAZARDOUS WASTE MANIFEST</b>		1. Generator's US EPA ID No. NAH 000025004	Manifest Document No. 41046		2. Page 1 of 1	Information in the shaded areas is not required by Federal law.		
3. Generator's Name and Mailing Address Y PAY MORE CLERS 2210 S 320TH ST FEDERAL WAY WA 98003-8417					A. State Manifest Document Number			
4. Generator's Phone (206) 445-2560					B. State Generator's ID			
5. Transporter 1 Company Name SAFETY-KLEEN CORP.			6. US EPA ID Number 000 000712059		C. State Transporter's ID			
7. Transporter 2 Company Name			8. US EPA ID Number		D. Transporter's Phone 206 939-2022			
9. Designated Facility Name and Site Address SAFETY-KLEEN CORP. 3210 G STREET NW AUBURN, WA 98002			10. US EPA ID Number 1-181-51 UNIT G NAH 000712059		E. State Transporter's ID			
					F. Transporter's Phone			
					G. State Facility's ID			
					H. Facility's Phone 206 939-2022			
11. US DOT Description (Including Proper Shipping Name, Hazard Class and ID Number)					12. Containers No.	13. Total Quantity	14. Unit Wt/Vol	15. Waste No.
a. <input checked="" type="checkbox"/> HM RM WASTE PERCHLOROETHYLENE ORM-A UN1897 (EPA 1002)					6	1170	P	F002
b.								
c.								
d. NOTICE: IN ACCORDANCE WITH 40 CFR 269.7, THE GENERATOR PROVIDES NOTICE THAT THE WASTE DESCRIBED AS WASTE PERCHLOROETHYLENE IS A RESTRICTED WASTE. THE WASTE CONTAINS THE FOLLOWING CONSTITUENT WHOSE TREATMENT STANDARD IS NOTED: TETRACHLOROETHYLENE (0.05 PPM)					K. Handling Codes for Wastes Listed Above			
15. Special Handling Instructions and Additional Information IF UNDELIVERABLE, RETURN TO GENERATOR. FOR RECYCLE					9002 12128070 941046 1-181-51-1026 10			
16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.  If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.								
Printed/Typed Name Celia Price					Signature <i>Celia Price</i>		Date 1/11/90	
17. Transporter 1 Acknowledgement of Receipt of Materials					Date			
Printed/Typed Name E. POLKINGSHORP					Signature <i>E. Polkingshorp</i>		Month Day Year 1/11/90	
18. Transporter 2 Acknowledgement of Receipt of Materials					Date			
Printed/Typed Name					Signature		Month Day Year	
19. Discrepancy Indication Space								
20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in item 19.								
Printed/Typed Name DAN KINTZ					Signature <i>D. Kintz</i>		Month Day Year 1/11/90	



Please print or type. (Form designed for use on 12-pitch typewriter.)

Form Approved. OMB No. 2050-0039. Expires 9-30-91

Main reporting burden for this collection of information is estimated to average 30 minutes per response, including reviewing instructions, gathering data, and completing and reviewing the form. Send comments regarding this burden estimate, including suggestions for reducing this burden, to: Chief, Information Policy Branch, PM-223, U.S. Environmental Protection Agency, 401 M Street, SW, Washington, DC 20460; and to the Office of Information and Regulatory Affairs, Office of Management and Budget, Washington, DC 20503.

<b>UNIFORM HAZARDOUS WASTE MANIFEST</b>		1. Generator's US EPA ID No. MA0 000712094	Manifest Document No. 87904		2. Page 1 of 1	Information in the shaded areas is not required by Federal law.			
3. Generator's Name and Mailing Address Y PAY ROAD CENTER 3210 S JUDITH ST FEDERAL WAY MA 00001-0417					A. State Manifest Document Number				
4. Generator's Phone (205) 239-2303					B. State Generator's ID				
5. Transporter 1 Company Name SAFETY-KLEEN CORP.			6. US EPA ID Number MA0 000712094		C. State Transporter's ID				
7. Transporter 2 Company Name			8. US EPA ID Number		D. Transporter's Phone 205 949-2022				
9. Designated Facility Name and Site Address SAFETY-KLEEN CORP. 3210 S JUDITH ST AUBURN, MA 00001			10. US EPA ID Number 1-101-54 UNIT 0 MA0 000712094		E. State Transporter's ID				
					F. Transporter's Phone				
					G. State Facility's ID				
					H. Facility's Phone 205 949-2022				
11. US DOT Description (Including Proper Shipping Name, Hazard Class and ID Number)					12. Containers		13. Total Quantity	14. Unit Wt/Vol	15. Waste No.
a. X RM WASTE PERCHLOROE ETHYLENE ORD-A NASHV (FOULIERS 074)					1		195	P	F002
b.									
c.									
d.									
J. Additional Descriptions for Materials Listed Above					K. Handling Codes for Wastes Listed Above				
15. Special Handling Instructions and Additional Information IF UNDERGROUND STORAGE TANK TO GENERATOR/FOR RECYCLE EMERGENCY RESPONSE 800-450-2400 24HR SERVICE AS 806 DE CJ D1					9146 3310053 107904 1-101-51-1026 20				
16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations. If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.					Printed/Typed Name Sue K. Chaney		Signature 		Date 11/15/91
17. Transporter 1 Acknowledgement of Receipt of Materials					Printed/Typed Name Ron Nelson		Signature 		Date 11/18/91
18. Transporter 2 Acknowledgement of Receipt of Materials					Printed/Typed Name		Signature		Date
19. Discrepancy Indication Space									
20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.					Printed/Typed Name D. K...		Signature 		Date 11/18/91

receiving instructions, gathering data, and completing and reviewing the form. Send comments regarding the burden estimate, including suggestions for reducing this burden, to: Chief, Information Policy Branch, PM-223, U.S. Environmental Protection Agency, 401 M Street, SW, Washington, DC 20460; and to the Office of Information and Regulatory Affairs, Office of Management and Budget, Washington, DC 20503.

<b>UNIFORM HAZARDOUS WASTE MANIFEST</b>		1. Generator's US EPA ID No. MA 00030004	Manifest Document No. 34659	2. Page 1 of 1	Information in the shaded areas is not required by Federal law.	
3. Generator's Name and Mailing Address Y PAY MORE CORP 2210 S 120TH FEDERAL WAY MA 00003-5417				A. State Manifest Document Number		
4. Generator's Phone (206) 939-2220				B. State Generator's ID		
5. Transporter 1 Company Name SAFETY-KLEEN CORP.		6. US EPA ID Number MA 000712059		C. State Transporter's ID		
7. Transporter 2 Company Name		8. US EPA ID Number		D. Transporter's Phone 206-939-2022		
9. Designated Facility Name and Site Address SAFETY-KLEEN CORP 3210 C STREET NE AUBURN, WA 98003		10. US EPA ID Number WA 000712059		E. State Transporter's ID		
				F. Transporter's Phone		
				G. State Facility's ID		
				H. Facility's Phone 206-939-2022		
11. US DOT Description (Including Proper Shipping Name, Hazard Class and ID Number)				12. Containers No.	13. Total Quantity	14. Unit (Wt/Vol)
a. X RM WASTE PERCHLOROETHYLENE ORN-D, LIQ (PG2) (SG 174)				10	DM	100
b. X RM WASTE PERCHLOROETHYLENE ORN-D, LIQ (PG2) (SG 174)				5	DM	975 P
c.						
d.						
J. Additional Descriptions for Materials Listed Above				K. Handling Codes for Wastes Listed Above		
15. Special Handling Instructions and Additional Information IF UNRECOVERABLE, RETURN TO GENERATOR/FOR RECYCLE EMERGENCY RESPONSE 888-466-2468 SKD07# A: 506 B: 506 C: D:						
16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations. If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.						
Printed/Typed Name Tami Yang				Signature 		Date 10/15/91
17. Transporter 1 Acknowledgement of Receipt of Materials				Printed/Typed Name Ron Johnson		Date 10/15/91
18. Transporter 2 Acknowledgement of Receipt of Materials				Printed/Typed Name		Date
19. Discrepancy Indication Space						
20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.				Printed/Typed Name Dan Fox		Date 10/15/91
				Signature 		

Please print or type. (Form designed for use on ( 12-pitch) typewriter.) Form Approved. OMB No. 2050-0039. Expires 9-30-91  
 Send comments regarding the burden estimate, including suggestions for reducing this burden, to: Chief, Information Policy Branch, PM-223, U.S. Environmental Protection Agency, 401 M Street, SW, Washington, DC 20460; and to the Office of Information and Regulatory Affairs, Office of Management and Budget, Washington, DC 20503.

1-101-01

Please print or type. (Form designed for use on ( 12-pitch) typewriter.) Form Approved. OMB No. 2050-0039. Expires 9-30-91

<b>UNIFORM HAZARDOUS WASTE MANIFEST</b>		1. Generator's US EPA ID No. WPD 920783089	Manifest Document No. 65014		2. Page 1 of 1	Information in the shaded areas is not required by Federal law.		
3. Generator's Name and Mailing Address Y PAU MOVE 2210 S. 220 P.O. BOX 1000 WINDY HILL WA					A. State Manifest Document Number			
4. Generator's Phone ( LCL ) 509-2264					B. State Generator's ID			
5. Transporter 1 Company Name SAFETY-KLEEN CORP.			6. US EPA ID Number WA00 000712059		C. State Transporter's ID			
7. Transporter 2 Company Name					D. Transporter's Phone 509-249-2022			
8. US EPA ID Number					E. State Transporter's ID			
9. Designated Facility Name and Site Address SAFETY-KLEEN CORP. 3210 C STREET NW AUBURN, WA 98002					10. US EPA ID Number 1-101-01 UNIT G WA00 000712059		F. State Facility's ID	
					G. Facility's Phone 509-249-2022			
11. US DOT Description (Including Proper Shipping Name, Hazard Class and ID Number)					12. Containers No.	13. Total Quantity	14. Unit Wt/Vol	Waste No.
a. HM X RD WASTE PERCHLOROETHYLENE ORM-A NAL99 (P002) (ERG 974)					4	DM	280	P002
b.								
c.								
d.								
J. Additional Descriptions for Materials Listed Above					K. Handling Codes for Wastes Listed Above			
16. Special Handling Instructions and Additional Information EMERGENCY RESPN 1-700-998-6660 (24 HR) IF UNDELIVERABLE, RETURN TO GENERATOR 1-101-01-1076 PPH M65014 SKODS 01 406 D1 CB 01								
16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations. If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.								
Printed/Typed Name Toni Yang			Signature 		Date 10/29/91			
17. Transporter 1 Acknowledgement of Receipt of Materials					Date			
Printed/Typed Name RON NELSON			Signature 		Date 10/29/91			
18. Transporter 2 Acknowledgement of Receipt of Materials					Date			
Printed/Typed Name			Signature		Date			
19. Discrepancy Indication Space								
20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.								
Printed/Typed Name Leslie A Nash			Signature 		Date 11/12/91			

Please print or type. (Form designed for use on a 2 1/2 inch typewriter.)

Form Approved. OMB No. 2050-0039. Expires 9-30-91

<b>UNIFORM HAZARDOUS WASTE MANIFEST</b>		1. Generator's US EPA ID No.	Manifest Document No.		2. Page 1 of 1	Information in the shaded areas is not required by Federal law.		
3. Generator's Name and Mailing Address Y P P S I O P O 2710 940-2310					A. State Manifest Document Number			
4. Generator's Phone					B. State Generator's ID			
5. Transporter 1 Company Name SAFETY-KLEEN CORP.			6. US EPA ID Number HAM 000712049		C. State Transporter's ID			
7. Transporter 2 Company Name			8. US EPA ID Number		D. Transporter's Phone			
9. Designated Facility Name and Site Address SAFETY-KLEEN CORP. 320 C STREET NE AUBURN, WA 98002			10. US EPA ID Number 1-101-01 UNIT 0 HAM 000712059		E. State Transporter's ID			
					F. Transporter's Phone			
					G. State Facility's ID			
					H. Facility's Phone 206-949-2022			
11. US DOT Description (Including Proper Shipping Name, Hazard Class and ID Number)					12. Containers No.	13. Total Quantity	14. Unit Wt/Vol	15. Waste No.
a. HM HAZ WASTE PERCHLOROETHYLENE UNCL-A 401007 (FOOD) IERG 0741					6	DM	470	P
b.								
c.								
d.								
J. Additional Descriptions for Materials Listed Above					K. Handling Codes for Wastes Listed Above			
15. Special Handling Instructions and Additional Information EMERGENCY RESPN 1-708-088-4660 (34 HR) IF UNDELIVERABLE, RETURN TO GENERATOR E-101-88-1034 EPA 160017 SKDDYD A1 806 D1 C2								
16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations. If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, If I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.								
Printed/Typed Name					Signature		Date	
Jenny Cheek					[Signature]		08/07/91	
17. Transporter 1 Acknowledgement of Receipt of Materials								
Printed/Typed Name					Signature		Date	
[Name]					[Signature]		08/07/91	
18. Transporter 2 Acknowledgement of Receipt of Materials								
Printed/Typed Name					Signature		Date	
19. Discrepancy Indication Space								
20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.								
Printed/Typed Name					Signature		Date	
Jenny Cheek					[Signature]		08/10/91	

U.S. Environmental Protection Agency, 401 M Street, SW, Washington, DC 20460; and to the Office of Information and Regulatory Affairs, Office of Management and Budget, Washington, DC 20503.

**UNIFORM HAZARDOUS WASTE MANIFEST**

1. Generator's US EPA ID No. 000 7007037094 Manifest Document No. 80210  
 2. Page 1 of 1 Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address  
Y RAY BURE CORP  
2310 S 120TH ST  
FULLER, MA  
 4. Generator's Phone (296) 840-2100

A. State Manifest Document Number

B. State Generator's ID

5. Transporter 1 Company Name SAFETY-KLEEN CORP 6. US EPA ID Number 000 000712054

C. State Transporter's ID

D. Transporter's Phone 206 938-2022  
 E. State Transporter's ID

7. Transporter 2 Company Name 8. US EPA ID Number

F. Transporter's Phone

9. Designated Facility Name and Site Address SAFETY-KLEEN CORP 10. US EPA ID Number 000 000712054  
3210 S 120TH ST  
AUBURN, MA

G. State Facility's ID  
 H. Facility's Phone 206 938-2022

11. US DOT Description (Including Proper Shipping Name, Hazard Class and ID Number)  
 12. Containers No. Type 13. Total Quantity 14. Unit Wt/Vol 1. Waste No.

HM	US DOT Description	No.	Type	Total Quantity	Unit Wt/Vol	Waste No.
a.	<u>60 MAYS TETRACHLOROETHYLENE</u> <u>DOT 4 DALB07 (P002) (P00 074)</u>	<u>6</u>	<u>DM</u>	<u>420</u>	<u>P</u>	<u>P002</u>
b.						
c.						
d.						

J. Additional Descriptions for Materials Listed Above  
 K. Handling Codes for Wastes Listed Above

15. Special Handling Instructions and Additional Information  
IF UNDELIVERABLE, RETURN TO GENERATOR/FOR RECYCLE  
9130 31116833 480210 1-181-SI-1026 70  
EMERGENCY ASSISTANCE 220-4600 24HR SERVICE AT 1-800-421-0000

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.  
 If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name John J. ... Signature [Signature] Date 09/19/91

17. Transporter 1 Acknowledgement of Receipt of Materials  
 Printed/Typed Name [Name] Signature [Signature] Date 09/19/91

18. Transporter 2 Acknowledgement of Receipt of Materials  
 Printed/Typed Name \_\_\_\_\_ Signature \_\_\_\_\_ Date \_\_\_\_\_

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.  
 Printed/Typed Name [Name] Signature [Signature] Date 10/14/91

Public reporting burden for this collection of information is estimated to average 37 minutes per response, including the time for reviewing instructions, gathering data, and reviewing the form. Send comments regarding the burden estimate, including suggestions for reducing this burden, to: Chief, Information Policy Branch, PM-223, U.S. Environmental Protection Agency, 401 M Street, SW, Washington, DC 20460; and to the Office of Information and Regulatory Affairs, Office of Management and Budget, Washington, DC 20503.

reviewing instructions, gathering data, and completing and reviewing the form. Send comments regarding the burden estimate, including suggestions for reducing this burden, to: Chief, Information Policy Branch, PM-223, U.S. Environmental Protection Agency, 401 M Street, SW, Washington, DC 20460; and to the Office of Information and Regulatory Affairs, Office of Management and Budget, Washington, DC 20503.

<b>UNIFORM HAZARDOUS WASTE MANIFEST</b>		1. Generator's US EPA ID No. MA0 000712059	Manifest Document No. 76137		2. Page 1 of 1	Information in the shaded areas is not required by Federal law.			
3. Generator's Name and Mailing Address Y PAY MORE COLORS 2310 S TROTH ST FEDERAL WAY WA 98003-5417					A. State Manifest Document Number				
4. Generator's Phone (206) 939-2167					B. State Generator's ID				
5. Transporter 1 Company Name SAFETY-KLEEN CORP.			6. US EPA ID Number MA0 000712059		C. State Transporter's ID				
7. Transporter 2 Company Name			8. US EPA ID Number		D. Transporter's Phone 206 939-2022				
9. Designated Facility Name and Site Address SAFETY-KLEEN CORP. 3210 C STREET SW BURDEN, WA			10. US EPA ID Number MA0 000712059		E. State Transporter's ID				
					F. Transporter's Phone				
					G. State Facility's ID				
					H. Facility's Phone 206 939-2022				
11. US DOT Description (Including Proper Shipping Name, Hazard Class and ID Number)						12. Containers	13. Total	14. Unit	15. Waste No.
a. HM X RQ WASTE PERCHLOROETHYLENE ORM-A NA1897 (P002)(ERG #74)						No. Type	Quantity	Wt/Vol	
						1	DF	195	002
b.									
c.									
d.									
J. Additional Descriptions for Materials Listed Above						K. Handling Codes for Wastes Listed Above			
15. Special Handling Instructions and Additional Information IF UNREMOVABLE, RETURN TO GENERATOR/FOR RECYCLE EMERGENCY RESP 8700-688-6600 24HR SKDDTE A1 506 B1 C1 D1						9130 29226073 776137 1-101-51-1026 20			
16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable International and national government regulations. If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.									
Printed/Typed Name Soo K CHAN					Signature 		Date 7/31/91		
17. Transporter 1 Acknowledgement of Receipt of Materials									
Printed/Typed Name DAN KENTON					Signature 		Date 07/31/91		
18. Transporter 2 Acknowledgement of Receipt of Materials									
Printed/Typed Name					Signature		Date		
19. Discrepancy Indication Space									
20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.									
Printed/Typed Name Dave Smith					Signature 		Date 07/31/91		

Please print or type. (Form designed for use on (12-pitch) typewriter.)

Form Approved. OMB No. 2050-0039. Expires 9-30-91

Public reporting burden for this collection of information is estimated to average 37 minutes per response, including the time for reviewing instructions, gathering data, and completing and reviewing the form. Send comments regarding the burden estimate, including suggestions for reducing this burden, to: Chief, Information Policy Branch, PM-223, U.S. Environmental Protection Agency, 401 M Street, SW, Washington, DC 20460; and to the Office of Information and Regulatory Affairs, Office of Management and Budget, Washington, DC 20503.

<b>UNIFORM HAZARDOUS WASTE MANIFEST</b>		1. Generator's US EPA ID No. MA0 987983006		Manifest Document No. 23558		2. Page 1 of 1		Information in the shaded areas is not required by Federal law.			
		3. Generator's Name and Mailing Address V PAV RIDGE CLINTS 2210 S 320TH ST FARBER, MA 01803-5417						A. State Manifest Document Number		B. State Generator's ID	
4. Generator's Phone (206) 966-2169		5. Transporter 1 Company Name SAFETY-KLEEN CORP.		6. US EPA ID Number MA0 000712089		C. State Transporter's ID		D. Transporter's Phone 206 639-2022		E. State Transporter's ID	
7. Transporter 2 Company Name		8. US EPA ID Number		9. Designated Facility Name and Site Address SAFETY-KLEEN CORP. 3210 C STREET MA AUBURN, MA 01502		10. US EPA ID Number 1-181-51 UNIT G MA0 000712089		F. Transporter's Phone		G. State Facility's ID	
11. US DOT Description (Including Proper Shipping Name, Hazard Class and ID Number)		12. Containers		13. Total Quantity		14. Unit Wt/Vol		1. Waste No.			
a. HM X BR WASTE FRACH, CHROFIVLURE ORR-A W1197 (COOLING AG 374)		No. Type 1 DF		195		p		7002			
b.											
c.											
d.											
J. Additional Descriptions for Materials Listed Above						K. Handling Codes for Wastes Listed Above					
15. Special Handling Instructions and Additional Information 9126 20279024 423555 1-181-51-1026 20 IF UNDELIVERABLE, RETURN TO GENERATOR/FOR RECYCLE EMERGENCY RESP# 708-800-4660 24HR SKODIA A: 506 83 C: D:											
16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations. If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.											
Printed/Typed Name X SORIC CHANG				Signature 				Date 06/20/91			
17. Transporter 1 Acknowledgement of Receipt of Materials											
Printed/Typed Name Ron Nelson				Signature 				Date 06/20/91			
18. Transporter 2 Acknowledgement of Receipt of Materials											
Printed/Typed Name				Signature				Date Month Day Year			
19. Discrepancy Indication Space											
20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in item 19.											
Printed/Typed Name D. KENT				Signature 				Date 06/20/91			

Please print or type. (Form designed for use on 12-pitch typewriter.)

Form Approved. OMB No. 2050-0039. Expires 9-30-91

Reviewing instructions, gathering data, and completing and reviewing the form. Send comments regarding the burden estimate, including suggestions for reducing this burden, to: Chief, Information Policy Branch, PM-223, U.S. Environmental Protection Agency, 401 M Street, SW, Washington, DC 20460; and to the Office of Information and Regulatory Affairs, Office of Management and Budget, Washington, DC 20503.

<b>UNIFORM HAZARDOUS WASTE MANIFEST</b>		1. Generator's US EPA ID No. WAD 9809R3084	Manifest Document No. 75627		2. Page 1 of 1	Information in the shaded areas is not required by Federal law.				
3. Generator's Name and Mailing Address Y PAY MORE CLNRS 2210 S 320TH ST FEDERAL WAY MA 98003-5417					A. State Manifest Document Number					
4. Generator's Phone (206) 946-2369					B. State Generator's ID					
6. Transporter 1 Company Name SAFETY-KLEEN CORP.			8. US EPA ID Number WAD 000712059		C. State Transporter's ID					
7. Transporter 2 Company Name			8. US EPA ID Number		D. Transporter's Phone 206-939-2022					
9. Designated Facility Name and Site Address SAFETY-KLEEN CORP. 3210 C STREET NE AUBURN, MA 98002					10. US EPA ID Number 1-181-51 UNIT G WAD 000712059					
					E. State Transporter's ID					
					F. Transporter's Phone					
					G. State Facility's ID					
					H. Facility's Phone 206-939-2022					
11. US DOT Description (Including Proper Shipping Name, Hazard Class and ID Number)						12. Containers	13. Total Quantity	14. Unit Wt/Vol	15. Waste No.	
a. X RM WASTE PERCHLOROETHYLENE ORM-A NA1897 (F002)(ERG 474)						1	DF	195	P	F002
b.										
c.										
d.										
J. Additional Descriptions for Materials Listed Above						K. Handling Codes for Wastes Listed Above				
15. Special Handling Instructions and Additional Information 9122 27410703 075627 1-181-51-1026 20 IF UNDELIVERABLE, RETURN TO GENERATOR/FOR RECYCLE  EMERGENCY RESP#708-888-4660 24HR SKDOT# A: 506 B: C: D:										
16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.  If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.										
Printed/Typed Name Tami Yang					Signature <i>Tami Yang</i>			Date 05 28 91		
17. Transporter 1 Acknowledgement of Receipt of Materials					Signature <i>Ron Nelson</i>			Date 05 28 91		
18. Transporter 2 Acknowledgement of Receipt of Materials					Signature			Date		
19. Discrepancy Indication Space										
20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in item 19.					Signature <i>D. Kirtch</i>			Date 05 28 91		

Please print or type. (Form designed for use on 12-pitch typewriter.)

Form Approved. OMB No. 2050-0039. Expires 9-30-91

reviewing instructions, gathering data, and completing and reviewing the form. Send comments regarding the burden estimate, including suggestions for reducing this burden, to: Chief, Information Policy Branch, PM-223, U.S. Environmental Protection Agency, 401 M Street, SW, Washington, DC 20460; and to the Office of Information and Regulatory Affairs, Office of Management and Budget, Washington, DC 20503.

<b>UNIFORM HAZARDOUS WASTE MANIFEST</b>		1. Generator's US EPA ID No. WA 980983084	Manifest Document No. 30599		2. Page 1 of 1	Information in the shaded areas is not required by Federal law.			
3. Generator's Name and Mailing Address Y PAY MORE CLNRS 2210 S 320TH ST FEDERAL WAY WA 98003-5417					A. State Manifest Document Number				
4. Generator's Phone (206) 946-2369					B. State Generator's ID				
5. Transporter 1 Company Name SAFETY-KLEEN CORP.			6. US EPA ID Number WA 000712059		C. State Transporter's ID				
7. Transporter 2 Company Name			8. US EPA ID Number		D. Transporter's Phone (206) 949-2022				
9. Designated Facility Name and Site Address SAFETY-KLEEN CORP. 3210 C STREET NE AUBURN, WA 98002			10. US EPA ID Number 1-181-51 UNIT C WA 000712059		E. State Transporter's ID				
					F. Transporter's Phone				
					G. State Facility's ID				
					H. Facility's Phone 206 949-2022				
11. US DOT Description (Including Proper Shipping Name, Hazard Class and ID Number)						12. Containers	13. Total	14. Unit	15. Waste No.
						No.	Quantity	Wt/Vol	
a. <input checked="" type="checkbox"/> RM RO WASTE PERCHLOROETHYLENE ORM-A NA1897 (F002) (ERG #74)						2	DF	390	P F002
b. <input checked="" type="checkbox"/> RO WASTE PERCHLOROETHYLENE ORM-A NA1897 (F002) (ERG #74)						1	DM	280	P F002
c.									
d.									
J. Additional Descriptions for Materials Listed Above						K. Handling Codes for Wastes Listed Above			
15. Special Handling Instructions and Additional Information 9118 26524058 730599 1-181-51-1026 20 IF UNDELIVERABLE, RETURN TO GENERATOR/FOR RECYCLE EMERGENCY RESPONSE 888-4660 24HR SKDDT# A1 S06 B1 C1 D1									
16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable International and national government regulations. If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.						Date			
Printed/Typed Name X SEA K CHANG			Signature <i>[Signature]</i>			Month Day Year 04 30 91			
17. Transporter 1 Acknowledgement of Receipt of Materials						Date			
Printed/Typed Name Ron Nelson			Signature <i>[Signature]</i>			Month Day Year 05 13 91			
18. Transporter 2 Acknowledgement of Receipt of Materials						Date			
Printed/Typed Name			Signature			Month Day Year			
19. Discrepancy Indication Space									
20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.									
Printed/Typed Name DAN KLUETZ			Signature <i>[Signature]</i>			Month Day Year 05 13 91			

reviewing instructions, gathering data, and completing and reviewing the form. Send comments regarding the burden estimate, including suggestions for reducing this burden, to: Chief, Information Policy Branch, PM-223, U.S. Environmental Protection Agency, 401 M Street, SW, Washington, DC 20460; and to the Office of Information and Regulatory Affairs, Office of Management and Budget, Washington, DC 20503.

<b>UNIFORM HAZARDOUS WASTE MANIFEST</b>		1. Generator's US EPA ID No. WA0 000703084	Manifest Document No. 04965	2. Page 1 of 1	Information in the shaded areas is not required by Federal law.	
3. Generator's Name and Mailing Address Y PAY MORE CLERS 2210 S 320TH ST FEDERAL WAY WA 98003-5417				A. State Manifest Document Number		
4. Generator's Phone (206) 946-2369				B. State Generator's ID		
5. Transporter 1 Company Name SAFETY-KLEEN CORP.		6. US EPA ID Number WA0 000712055		C. State Transporter's ID		
7. Transporter 2 Company Name		8. US EPA ID Number		D. Transporter's Phone 206-939-2022		
9. Designated Facility Name and Site Address SAFETY-KLEEN CORP. 3210 C STREET NW OUBURN, WA 98002		10. US EPA ID Number 1-181-51 UNIT G WA0 000712059		E. State Transporter's ID		
				F. Transporter's Phone		
				G. State Facility's ID		
				H. Facility's Phone 206-939-2022		
11. US DOT Description (Including Proper Shipping Name, Hazard Class and ID Number)		12. Containers	13. Total Quantity	14. Unit Wt/Vol	1. Waste No.	
a. <input checked="" type="checkbox"/> HM X RG WASTE PERCHLOROETHYLENE OPM-A 1A1397 (F002) (ERG 174)		No. Type 1 DP er pr	195 pr	P	F002	
b.						
c.						
d.						
J. Additional Descriptions for Materials Listed Above				K. Handling Codes for Wastes Listed Above		
15. Special Handling Instructions and Additional Information 9114 28614629 384965 1-181-51-1026 20 IF UNDELIVERABLE, RETURN TO GENERATOR/FOR RECYCLE EMERGENCY RESP 1-708-888-4660 EMERGENCY RESP 708-888-4660 24HR SKDOT# A: 600 B: CY RI						
16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations. If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.						
Printed/Typed Name X LOU K CHANG				Signature 		Date 05/01/91
17. Transporter 1 Acknowledgement of Receipt of Materials				Signature 		Date 05/01/91
Printed/Typed Name Ron Nelson				Signature		Date
18. Transporter 2 Acknowledgement of Receipt of Materials				Signature		Date
Printed/Typed Name				Signature		Date
19. Discrepancy Indication Space						
20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in item 19.						
Printed/Typed Name DAN KOSTER				Signature 		Date 05/01/91

TRANSPORTER #2

Public reporting burden for this collection of information is estimated to average 37 minutes for generators, 15 minutes for transporters, and 10 minutes for treatment, storage and disposal facilities. This includes the time for reviewing instructions, gathering data, and completing and reviewing the form. Send comments regarding the burden estimate, including suggestions for reducing this burden, to: Chief, Information Policy Branch, PM-223, U.S. Environmental Protection Agency, 401 M Street, SW, Washington, DC 20460; and to the Office of Information and Regulatory Affairs, Office of Management and Budget, Washington, DC 20503.

<b>UNIFORM HAZARDOUS WASTE MANIFEST</b>		1. Generator's US EPA ID No. WA0980983004		Manifest Document No. 46142		2. Page 1 of 1		Information in the shaded areas is not required by Federal law.					
		3. Generator's Name and Mailing Address Y PAY MORE CLMS 2210 S 320TH ST FEDERAL WAY WA 98003-5417						A. State Manifest Document Number		B. State Generator's ID			
5. Transporter 1 Company Name SAFETY-KLEEN CORP.				6. US EPA ID Number WA0900712089		C. State Transporter's ID		D. Transporter's Phone 206 939-2022		E. State Transporter's ID			
7. Transporter 2 Company Name				8. US EPA ID Number		F. Transporter's Phone		G. State Facility's ID		H. Facility's Phone 206 939-2022			
9. Designated Facility Name and Site Address SAFETY-KLEEN CORP. 3210 C STREET NW AUBURN, WA 98002				10. US EPA ID Number 1-101-51 UNIT G WA0900712089									
11. US DOT Description (Including Proper Shipping Name, Hazard Class and ID Number)						12. Containers		13. Total Quantity		14. Unit Wt/Vol		1. Waste No.	
						No. Type							
a. RM X RM WASTE PERCHLOROETHYLENE ORM-A NA1897 (P002)(ERG 074)						2 DF		390		P		8002	
b.													
c.													
d. NOTICE: IN ACCORDANCE WITH 40 CFR 268.7, THE GENERATOR PROVIDES NOTICE THAT THE WASTE DESCRIBED AS WASTE PERCHLOROETHYLENE IS A RESTRICTED WASTE. THE WASTE CONTAINS THE FOLLOWING CONSTITUENT WHOSE TREATMENT STANDARD IS NOTED: TETRACHLOROETHYLENE 0.05 PPM						K. Handling Codes for Wastes Listed Above							
J. Additional Descriptions for Materials Listed Above													
15. Special Handling Instructions and Additional Information IF UNDELIVERABLE, RETURN TO GENERATOR/FOR RECYCLE EMERGENCY RESP#1-708-888-4660 SKDOT# A3 506 B3 C3 D3													
16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.  If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.						Printed/Typed Name Loo K CHANG		Signature 		Date 01/14/91			
17. Transporter 1 Acknowledgement of Receipt of Materials						Printed/Typed Name E. Hollenbach		Signature 		Date 01/14/91			
18. Transporter 2 Acknowledgement of Receipt of Materials						Printed/Typed Name		Signature 		Date			
19. Discrepancy Indication Space													
20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.						Printed/Typed Name Henry Chock		Signature 		Date 11/14/91		SAFETY-KLEEN CORP	

1-181-51

Please print or type. (Form designed for use on (12-pitch) typewriter.) Form Approved. OMB No. 2050-0039. Expires 9-30-92

I am voluntarily submitting this information to the Department of the Environment for the purpose of reviewing instructions, gathering data, and completing and reviewing the form. Send comments regarding the burden estimate, including suggestions for reducing this burden, to: Chief, Information Policy Branch, PM-223, U.S. Environmental Protection Agency, 401 M Street, SW, Washington, DC 20460; and to the Office of Information and Regulatory Affairs, Office of Management and Budget, Washington, DC 20503.

<b>UNIFORM HAZARDOUS WASTE MANIFEST</b>		1. Generator's US EPA ID No. MA 000712059	Manifest Document No. 48351	2. Page 1 of 1	Information in the shaded areas is not required by Federal law.
3. Generator's Name and Mailing Address Y PAY MORE CLERS 2210 S TROTT ST FEDERAL WAY MA 00003-0517				A. State Manifest Document Number	
4. Generator's Phone (206) 946-2389				B. State Generator's ID	
5. Transporter 1 Company Name SAFETY-KLEEN CORP.		6. US EPA ID Number MA 000712059		C. State Transporter's ID	
7. Transporter 2 Company Name		8. US EPA ID Number		D. Transporter's Phone 206-939-2022	
9. Designated Facility Name and Site Address SAFETY-KLEEN CORP. 3210 C STREET NE ABBURN, MA 03002		10. US EPA ID Number 1-181-51 UNIT 5 MA 000712059		E. State Transporter's ID	
				F. Transporter's Phone	
				G. State Facility's ID	
				H. Facility's Phone 206-939-2022	
11. US DOT Description (Including Proper Shipping Name, Hazard Class and ID Number)		12. Containers	13. Total Quantity	14. Unit Wt/Vol	15. Waste No.
a. HM X RM WASTE TETRACHLOROETHYLENE CLASS 3.1 UN1897 POLY(P002)(ERGH74)		No. Type 1 DF	195	P	P002 0030
b.					
c.					
d.					
J. Additional Descriptions for Materials Listed Above				K. Handling Codes for Wastes Listed Above	
15. Special Handling Instructions and Additional Information IF UNDELIVERABLE, RETURN TO GENERATOR/FOR RECYCLE EMERGENCY RESP# 700-888-6660 24HR SKDOT# A: 506 D: C: D1					
16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations. If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.					
Printed/Typed Name Soo K CHANG		Signature <i>Soo Ky Chang</i>		Date 05/28/92	
17. Transporter 1 Acknowledgement of Receipt of Materials					
Printed/Typed Name RON NELSON		Signature <i>Ron Nelson</i>		Date 05/28/92	
18. Transporter 2 Acknowledgement of Receipt of Materials					
Printed/Typed Name		Signature		Date	
19. Discrepancy Indication Space					
20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.					
Printed/Typed Name DAN KOUTER		Signature <i>Dan Kouter</i>		Date 05/28/92	

reviewing instructions, gathering data, and completing and reviewing the form. Send comments regarding the burden estimate, including suggestions for reducing this burden, to: Chief, Information Policy Branch, PM-223, U.S. Environmental Protection Agency, 401 M Street, SW, Washington, DC 20460; and to the Office of Information and Regulatory Affairs, Office of Management and Budget, Washington, DC 20503.

<b>UNIFORM HAZARDOUS WASTE MANIFEST</b>		1. Generator's US EPA ID No. WA090001084	Manifest Document No. 84400		2. Page 1 of 1	Information in the shaded areas is not required by Federal law.				
3. Generator's Name and Mailing Address Y PAY MORE CLERS 2310 S 320TH ST FEDERAL WAY WA 98003-5411					A. State Manifest Document Number					
4. Generator's Phone (206) 946-2369					B. State Generator's ID					
5. Transporter 1 Company Name SAFETY-KLEEN CORP.			6. US EPA ID Number WA0 000712059		C. State Transporter's ID					
7. Transporter 2 Company Name			8. US EPA ID Number		D. Transporter's Phone (206) 946-2369					
9. Designated Facility Name and Site Address SAFETY-KLEEN CORP. 3210 C STREET NE AUBURN, WA 99002					E. State Transporter's ID					
10. US EPA ID Number 1-101-51 UNIT 6 WA0 000712059					F. Transporter's Phone					
11. US DOT Description (Including Proper Shipping Name, Hazard Class and ID Number)					12. Containers No. Type		13. Total Quantity	14. Unit Wt/Vol	15. Waste No.	
a. X HM R4 WASTE PERCHLOROETHYLENE ONE-A NA1697 (FOUR) (RNG 874)					1		DF	195	P	FOUR 003A
b.										
c.										
d.										
J. Additional Descriptions for Materials Listed Above					K. Handling Codes for Wastes Listed Above					
15. Special Handling Instructions and Additional Information IF UNDELIVERABLE, RETURN TO GENERATOR/FOR RECYCLE EMERGENCY RESPONSE-800-468-6868 24HR SKOOTH A: 506 B: C: D:										
16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable International and national government regulations. If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.										
Printed/Typed Name GEOFF K. CHANCEY					Signature <i>[Signature]</i>			Date 1/30/92		
17. Transporter 1 Acknowledgement of Receipt of Materials										
Printed/Typed Name RON WILSON					Signature <i>[Signature]</i>			Date 01/30/92		
18. Transporter 2 Acknowledgement of Receipt of Materials										
Printed/Typed Name					Signature			Date		
19. Discrepancy Indication Space										
20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.										
Printed/Typed Name Sharon Semmill					Signature <i>[Signature]</i>			Date 1/30/92		

reviewing instructions, gathering data, and completing and reviewing the form. Send comments regarding the burden estimate, including suggestions for reducing this burden, to: Chief, Information Policy Branch, PM-223, U.S. Environmental Protection Agency, 401 M Street, SW, Washington, DC 20460; and to the Office of Information and Regulatory Affairs, Office of Management and Budget, Washington, DC 20503.

<b>UNIFORM HAZARDOUS WASTE MANIFEST</b>		1. Generator's US EPA ID No. MAH 000712059		Manifest Document No. 267 11		2. Page 1 of		Information in the shaded areas is not required by Federal law.						
3. Generator's Name and Mailing Address Y TAY MOBILE CLERS 2210 C STREET SE FEDERAL WAY AUBURN, WA 99003-5417						A. State Manifest Document Number								
4. Generator's Phone (360) 261-2000						B. State Generator's ID								
5. Transporter 1 Company Name SAFETY-KLEEN CORP.				6. US EPA ID Number MAH 000712059		C. State Transporter's ID								
7. Transporter 2 Company Name				8. US EPA ID Number		D. Transporter's Phone 206-939-2022								
9. Designated Facility Name and Site Address SAFETY-KLEEN CORP. 3210 C STREET SE AUBURN, WA				10. US EPA ID Number MAH 000712059		E. State Transporter's ID								
						F. Transporter's Phone								
						G. State Facility's ID								
						H. Facility's Phone 206-939-2022								
11. US DOT Description (Including Proper Shipping Name, Hazard Class and ID Number)						12. Containers		13. Total		14. Unit		15. Waste No.		
a. HM X RD WASTE REPAIR (POLYETHYLENE) DAM - A WASTE (POSS) (CORR. #14)						No. Type		Quantity		Wt/Vol		F002 0039		
b.														
c.														
d.														
J. Additional Descriptions for Materials Listed Above						K. Handling Codes for Wastes Listed Above								
15. Special Handling Instructions and Additional Information IF UNUSUALLY TOXIC, RETURN TO GENERATOR/FOR RECYCLE EMERGENCY RESCUE 700-800-6850 24HR SKUDYR A1 206 939 2022														
16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations. If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.														
Printed/Typed Name Soo Chong						Signature <i>[Signature]</i>			Date 11/12/92					
17. Transporter 1 Acknowledgement of Receipt of Materials						Printed/Typed Name Ron DeSousa			Signature <i>[Signature]</i>			Date 11/01/92		
18. Transporter 2 Acknowledgement of Receipt of Materials						Printed/Typed Name			Signature			Date		
19. Discrepancy Indication Space														
20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.														
Printed/Typed Name Kelli A. Hest						Signature <i>[Signature]</i>			Date 11/12/92					

Please print or type. (Form designed for use on 12-pitch typewriter.)

Form Approved. OMB No. 2050-0039. Expires 9-30-92

reviewing instructions, gathering data, and completing and reviewing the form. Send comments regarding the burden estimate, including suggestions for reducing this burden, to: Chief, Information Policy Branch, PM-223, U.S. Environmental Protection Agency, 401 M Street, SW, Washington, DC 20460; and to the Office of Information and Regulatory Affairs, Office of Management and Budget, Washington, DC 20503.

<b>UNIFORM HAZARDOUS WASTE MANIFEST</b>		1. Generator's US EPA ID No. WA 99009 3004	Manifest Document No. 13417		2. Page 1 of 1	Information in the shaded areas is not required by Federal law.			
3. Generator's Name and Mailing Address Y PRY MON... 2210 S 120TH ST FEDERAL WAY WA 98003-3417					A. State Manifest Document Number				
4. Generator's Phone (RUS) 146-1150					B. State Generator's ID				
5. Transporter 1 Company Name SAFETY-KLEEN CORP.			6. US EPA ID Number WA 000712039		C. State Transporter's ID				
7. Transporter 2 Company Name			8. US EPA ID Number		D. Transporter's Phone 206-939-2022				
9. Designated Facility Name and Site Address SAFETY-KLEEN CORP. 3210 C STREET SE AUBURN, WA 99002			10. US EPA ID Number 1-101-51 UNIT 5 WA 000712039		E. State Transporter's ID				
					F. Transporter's Phone				
					G. State Facility's ID				
					H. Facility's Phone 206-939-2022				
11. US DOT Description (Including Proper Shipping Name, Hazard Class and ID Number)						12. Containers	13. Total Quantity	14. Unit Wt/Vol	15. Waste No.
a. HM X AQ WASTE PERCHLOROETHYLENE ORM-A NA1897 (PG02) (RRG 874)						No. Type			
J. Additional Descriptions for Materials Listed Above						K. Handling Codes for Wastes Listed Above			
15. Special Handling Instructions and Additional Information 9210 3/145422 813417 1-101-51-1026 03 IF UNDELIVERABLE, RETURN TO GENERATOR/FOR RECYCLE EMERGENCY RESP/06-080-6650 24HR SKDDTR BL 506 BT C D									
16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations. If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.						Date			
Printed/Typed Name Kristina Hogan			Signature Kristina Hogan		Month Day Year 03/04/92				
17. Transporter 1 Acknowledgement of Receipt of Materials						Date			
Printed/Typed Name Ron Nelson			Signature		Month Day Year 03/04/92				
18. Transporter 2 Acknowledgement of Receipt of Materials						Date			
Printed/Typed Name			Signature		Month Day Year				
19. Discrepancy Indication Space									
20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.						Date			
Printed/Typed Name Don Semrud			Signature Don Semrud		Month Day Year 03/04/92				

Please print or type. (Form designed for use of (12-pitch) typewriter.)

Form Approved. OMB No. 2050-0039. Expires 9-30-92

Public reporting burden for this collection of information is estimated to average: 37 minutes for generators, 15 minutes for transporters, and 10 minutes for treatment, storage and disposal facilities. This includes time for reviewing instructions, gathering data, and completing and reviewing the form. Send comments regarding the burden estimate, including suggestions for reducing this burden, to: Chief, Information Policy Branch, PM-228, U.S. Environmental Protection Agency, 401 M Street, SW, Washington, DC 20460; and to the Office of Information and Regulatory Affairs, Office of Management and Budget, Washington, DC 20503.

<b>UNIFORM HAZARDOUS WASTE MANIFEST</b>		1. Generator's US EPA ID No. 0001 2507123	Manifest Document No. 518 770		2. Page 1 of 1	Information in the shaded areas is not required by Federal law.		
3. Generator's Name and Mailing Address Y PAY MORE CLERS 2210 S 120TH ST FEDERAL WAY WA 98003 5417					A. State Manifest Document Number			
4. Generator's Phone (206) 250-1100					B. State Generator's ID			
5. Transporter 1 Company Name SAFETY-KLEEN CORP.			6. US EPA ID Number WA01 000712059		C. State Transporter's ID			
7. Transporter 2 Company Name			8. US EPA ID Number		D. Transporter's Phone (206) 939-2022			
9. Designated Facility Name and Site Address SAFETY-KLEEN CORP. 3210 S STREET SE AUBURN, WA 98001 5417					E. State Transporter's ID			
10. US EPA ID Number WA01 000712039					F. Transporter's Phone			
					G. State Facility's ID			
					H. Facility's Phone 206 939-2022			
11. US DOT Description (Including Proper Shipping Name, Hazard Class and ID Number)					12. Containers	13. Total Quantity	14. Unit Wt/Vol	15. Waste No.
a. HM X RD WASTE PERCHLOROPOLYETHYLENE ORM-A 61847 (2002) (GRG #74)					No. 4	Type DF	200 P	F002 0039
b. X RG WASTE PERCHLOROPOLYETHYLENE ORM-A 61847 (2002) (GRG #74)					No. 1	Type DF	195 P	F002 0039
c.								
d.								
J. Additional Descriptions for Materials Listed Above					K. Handling Codes for Wastes Listed Above			
15. Special Handling Instructions and Additional Information IF UNDELIVERABLE, RETURN TO GENERATOR/FOR RECYCLE EMERGENCY RESP 206-880-6660 24HR SKULL# 01 506 H: 506 01 01								
16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations. If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.								
Printed/Typed Name GEO K CHANG					Signature 		Date 2/7/92	
17. Transporter 1 Acknowledgement of Receipt of Materials					Signature 		Date 02/07/92	
Printed/Typed Name RON NELSON					Signature		Date	
18. Transporter 2 Acknowledgement of Receipt of Materials					Signature		Date	
Printed/Typed Name					Signature		Date	
19. Discrepancy Indication Space								
20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.								
Printed/Typed Name Henry Chock					Signature 		Date 2/7/92	



AGRA Earth &  
Environmental, Inc.  
11335 NE 122nd Way  
Suite 100  
Kirkland, Washington  
U.S.A. 98034-6918  
Tel (206) 820-4669  
Fax (206) 821-3914

22 December 1994  
11-07883-11

Washington Department of Ecology  
Northwest Regional Office  
3190 160th Avenue S.E.  
Bellevue, WA 98008-5452

RECEIVED

JAN - 6 1995

DEPT. OF ECOLOGY

Attention: Ms. Elaine Atkinson  
Site Hazard Assessor-Toxics Cleanup Program

Subject: Independent Remedial Action Report (Submittal)  
Former Y-PAY-MOR Drycleaners  
2210 S. 320th Street  
Federal Way, Washington

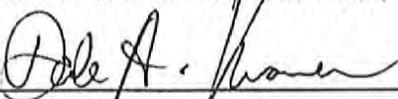
Dear Ms. Atkinson:

AGRA Earth & Environmental, Inc. (AGRA) is pleased to submit three copies of our Independent Remedial Action Report (IRAP) for the former Y-PAY-MOR drycleaners. The report was prepared according to the Guidance on Preparing Independent Remedial Action Reports, Draft March 1, 1994, Under the Model Toxics Control Act (Chapter 70.105D RCW).

The report is applicable to the Model Toxics Control Act Cleanup Regulations, Chapter 173-340 Washington State Administrative Code (WAC).

If you have any questions please do not hesitate to call. We look forward to your decisions concerning our remedial efforts at this site.

Respectfully submitted,  
AGRA Earth & Environmental, Inc.

  
\_\_\_\_\_  
Dale A. Kramer, M.Sc.

Project Scientist/Environmental Geologist





# Request for Review Independent Remedial Action Report

Please submit the following documents to the appropriate Ecology Office (see back of form)

- ~ Request for Review (ECY 020-74)
- ~ A check or money order for \$1,000, payable to: Department of Ecology
- ~ Independent Remedial Action Report Summary (ECY 020-73)
- ~ An Interim or Final Independent Remedial Action Report

Ecology's Independent Remedial Action Program provides for the review of Independent Remedial Action reports on a first-come, first-served basis. The Filing Fee paid with this submittal covers an initial review and is not refundable. The initial review will be completed within 90 days.

- If the enclosed remedial action report is accepted for detailed review, you will be notified if additional fees are required before detailed review begins (see fee schedule below).
- If the enclosed remedial action report is incomplete, you forfeit the \$1,000 Filing Fee. The report will be returned with suggestions about what additional information is needed. An additional \$1,000 fee will be required if you choose to resubmit.

Note: A copy of this form will be mailed to you. If you wish to inquire about the status of this request for review, please refer to the TCP I.D. number located on the bottom right corner of this form.

■ **TOTAL COST OF REMEDIAL ACTION** (include both contracted work and work performed by owner/operator):

Person/Entity Performing Work	Cost
AGRA Earth & Environmental	\$ 100,000
	\$
	\$
<b>Total Cost of Remedial Action</b>	<b>\$ 100,000</b>

Applicant Name: Northwest Building Corporation	Phone: (206 ) 464 - 5255
Applicant Address: 1300 Norton Building 801 Second Avenue Seattle, WA 98104	

Site Name: Former Y Pay Mor Drycleaner	Site Location: 2210 S. 320th. St. Federal Way WA.
--	--

Site Owner Name (if different than Applicant): AA	Phone: ( ) -
---	--------------

Site Owner Address: AA

(Applicant completes above this line, Ecology completes below this line)

FOR ECOLOGY USE ONLY

APPLICABLE REVIEW FEE (see schedule below) \$			
Received	Amount	Date	Received by
Filing Fee	\$ 1,000	1/6/95	E. Atkinson
*Fee Balance	\$ 1,000		

\*Note: A fee balance may be required. Please keep your receipt for submittal of your fee balance.

FEE SCHEDULE						
Cost of Remedial Action	Fee	173-02-04-005000-5000-	20	-	40	: \$
Filing Fee (applies to Detailed Review Fee)	\$ 1,000		(LUST/Non-LUST)		(Office)	
<b>DETAILED REVIEW FEE</b>		LUST/Non-LUST	<input type="checkbox"/> LUST-30	<input checked="" type="checkbox"/> Non-LUST-20		
Minimum Fee:	\$ 1,000	Office	<input checked="" type="checkbox"/> NWRO-40	<input type="checkbox"/> SWRO-60	<input type="checkbox"/> ERO-60	
\$50,000 - \$750,000:	2% of Cost		<input type="checkbox"/> CRO-70	<input type="checkbox"/> ND-80	<input type="checkbox"/> SCS-90	
Maximum Fee:	\$15,000	Office/Receipt #	194461			



### Facility Information

Site Name Former Y Pay Mor Drycleaner

Other Names (the site may be known as)

Site Control Person if other than Owner/Operator. (This must be a person who is on-site during normal working hours and is authorized and qualified to answer questions about the site, or a person who is available during normal business hours and has knowledge about the site and the remediation.)

Name Mr. John Bickley/ Northwest Building Corporation

Phone 464-5255

Site Mailing Address (or site contact mailing address)

801 Second Avenue, 1300 Norton Building Seattle, WA 98104

Site Location Address (including zip code)

2210 SW 320 St. (Best Shopping Mall), Federal Way, WA

98003

Closest City

County (where site is located)

King

Ownership and Operator Type. Complete the table below by checking the appropriate box to identify the type of owner and operator for the facility. (For example, if the property owner is a port district and the operator a private individual, then check the boxes under owner identification column in the municipal, code #2 row; and under the operator identification column in the private party, code #1 row.)

Ownership/Operator Type	Code #	Owner Identification	Operator Identification
Private Party	1	XXXXXXXX	
Municipal (Public)	2		
County	3		
Federal	4		
State	5		
Tribal	6		
Mixed	7		
Other	8		
Unknown	9		
Public Entity Acquisition through Bankruptcy	10		
Financial Institution Acquisition through Bankruptcy	11		

Standard Industrial Classification (SIC) Codes. List all that apply. If none apply, or if you don't know your SIC code, list activities conducted at the site, e.g., automotive repair and maintenance, construction equipment storage, etc.

dry cleaner

7216

Hazardous Substances Management Practices(s). The hazardous substance(s) cleaned up from the site was the result of which of the following sources, activities, or actions? Please circle all that apply to the facility.

1 = Drug Lab

2 = Drum

3 = A Leaking Impoundment

4 = Improper Handling

5 = Landfill

6 = Land Application

7 = Pesticide Application

8 = Pesticide Disposal

9 = A Spill

10 = Storm Drain

11 = Leaking Tank: (a) below ground; (b) above ground

12 = Unknown

End use of property (circle one) COMMERCIAL INDUSTRIAL RESIDENTIAL

### Release Information

Date of Release (if known) 8-91, 10-91	Date of Discovery day of release	Are there any drinking water systems affected? Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown <input checked="" type="checkbox"/>				
If drinking water systems are affected, are the systems public, private, or both? (circle one)		If drinking water systems are affected, has alternate drinking water been provided? Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown <input type="checkbox"/>				
General Hazardous Substance Categories. Using the contaminants listed below, complete the table. (A more detailed description of the contaminants can be found in Appendix C of the guidance.)						
Contaminants. For each of the applicable contaminants, enter the appropriate letter designating the status of the contaminants: C = Confirmed or S = Suspended. (Contaminant status definitions are defined in Appendix C of the guidance.)		Affected Media				
		Ground Water	Surface Water	Drinking Water	Soil	Air
1.	Halogenated Organic Compounds	C	R		C	R
2.	Metals - Priority Pollutants					
3.	Metals - Other					
4.	Polychlorinated Bi-Phenyls (PCBs)					
5.	Pesticides/Herbicides					
6.	Unleaded Gas					
	Leaded Gas					
	Diesel					
	Waste Oil					
	Heat Fuel					
	Other (Specify)					
7.	Phenolic Compounds					
8.	Non-Halogenated Solvents					
9.	Dioxins					
10.	Polynuclear Aromatic Hydrocarbons (PAHs)					
11.	Reactive Wastes					
12.	Corrosive Wastes					
13.	Radioactive Wastes					
14.	Conventional Contaminants Organics					
15.	Conventional Contaminants Inorganics					
16.	Base/Neutral Organic Compounds					
17.	Asbestos					

### Cleanup Information

Indicate cleanup level methods used by completing Table 5-A below. (check all that apply)

	Soil	Ground Water	Air	Surface Water
Method A	0.5 ppm	5.0 ppb	N/A	N/A
B	80 ppm		N/A	N/A
C	N/A	N/A	N/A	N/A
Have these levels been met throughout the site? (circle only one)	YES NO	YES NO	YES NO	YES NO

Indicate the treatment methods used by completing Tables 5B - 5D below (check all that apply) (See Appendix D)

	Destruction or Detoxification				Media Transfer		
	Carbon Adsorption <sup>1</sup>	Biological Treatment	Chemical Destruction	Incineration	Air Stripping/Air Sparging	Aeration/Vapor Extraction	Thermal Desorption
Soil	-NA-				-NA-	XXXX	
Ground Water				-NA-		-NA-	-NA-
Surface Water				-NA-		-NA-	-NA-
Air		-NA-				-NA-	
Wastes	-NA-				-NA-		-NA-

<sup>1</sup> Carbon followed by regeneration; use of granular activated carbon followed by landfilling would be classified in these tables as volume reduction and off-site landfill

**Cleanup Information (continued)**

**TABLE 5-C**

	Immobilization		Reuse/Recycling <sup>2</sup>	Separation/Volume Reduction		
	Vitrification	Solidification/ Stabilization	Specify	Solvent Extraction	Soil Washing	Physical Separation <sup>3</sup>
Soil				XXXXX		
Ground Water	-NA-	-NA-		-NA-	-NA-	
Surface Water	-NA-	-NA-		-NA-	-NA-	
Wastes						

<sup>2</sup>For example, reuse of free petroleum product recovered in a pump and treat system.  
<sup>3</sup>For example, oil/water separators.

**TABLE 5-D**

	Land Disposal/Containment		Institutional Controls	Others
	Containment or On-site Landfill	Off-site Landfill	Specify	Specify treatment method
Soil		XXXXX	Carbon Scrubbing	
Ground Water		-NA-		
Surface Water	-NA-	-NA-		
Wastes				

**Lust Site Information** N/A

Was free product encountered: on ground water? Yes  No  In excavation? Yes  No

Tank Description			Tank Status (Y or N)		
Tank ID	Product	Size	In Place?	Removed?	Closed in Place?

**Environmental Indicators**

Answer the following questions as they are applicable to your site:

How many cubic yards of soil have been treated? <u>15</u>	Where soil treatment was conducted, was it done on-site, off-site, or both? (circle one)
Provide the name and address of the facility where soil was treated off-site. Name <u>Northwest Enviroservice</u> Address <u>1500 Airport Way South</u> State/Zip <u>Seattle, WA 98134</u>	
Provide the name and address of the facility where soil was disposed. Name <u>Rabanco Landfill</u> Address <u>Klickitat County</u> State/Zip _____	
How many cubic yards of soil have been disposed of off-site? <u>15</u> (Calculate these quantities of soil while the soil is in place, prior to any excavation and/or treatment.)	
If ground water pump and treatment was conducted, how many gallons of ground water have been treated to date? _____ gallons	
How many years is the ground water extraction system expected to continue in operation? _____ years	

**Corrective Actions for Dangerous Waste Facilities**

Does the facility have a dangerous waste identification number?	<input checked="" type="checkbox"/> Yes. Specify <u>0980983084</u>	<input type="checkbox"/> No
Is the facility a dangerous waste treatment, sludge, or disposal facility?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
If yes, check appropriate regulatory status box <u>N/A</u>	<input type="checkbox"/> RCRA interim status <input type="checkbox"/> RCRA operating permit <input type="checkbox"/> RCRA post closure permit <input type="checkbox"/> Other, specify	

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Figure 1 - Location Map

Figure 2 - Site and Exploration Plan

Figure 3 - Soil Gas Survey Location Map, April 1993

Figure 4 - Graph of PCE Soil Gas Recovery Concentrations

Table 1 - Emergency Response Soils Analytical Test Results; 10 June 1992

Table 2A - Remedial Investigation Soils Analytical Test Results; 25 August through 28 August 1992

Table 2B - Remedial Investigation Soils Analytical Test Results; 27 and 28 December 1992

Table 3A - Soil Vapor Survey Analytical Results (September 1992)

Mr. John Bickley  
25 April 1994

W-7883-11  
Page 4

**TABLES OF CONTENTS**  
**(continued)**  
**11-7883-11**

Table 3B - Soil Vapor Survey Analytical Results (April 1992)

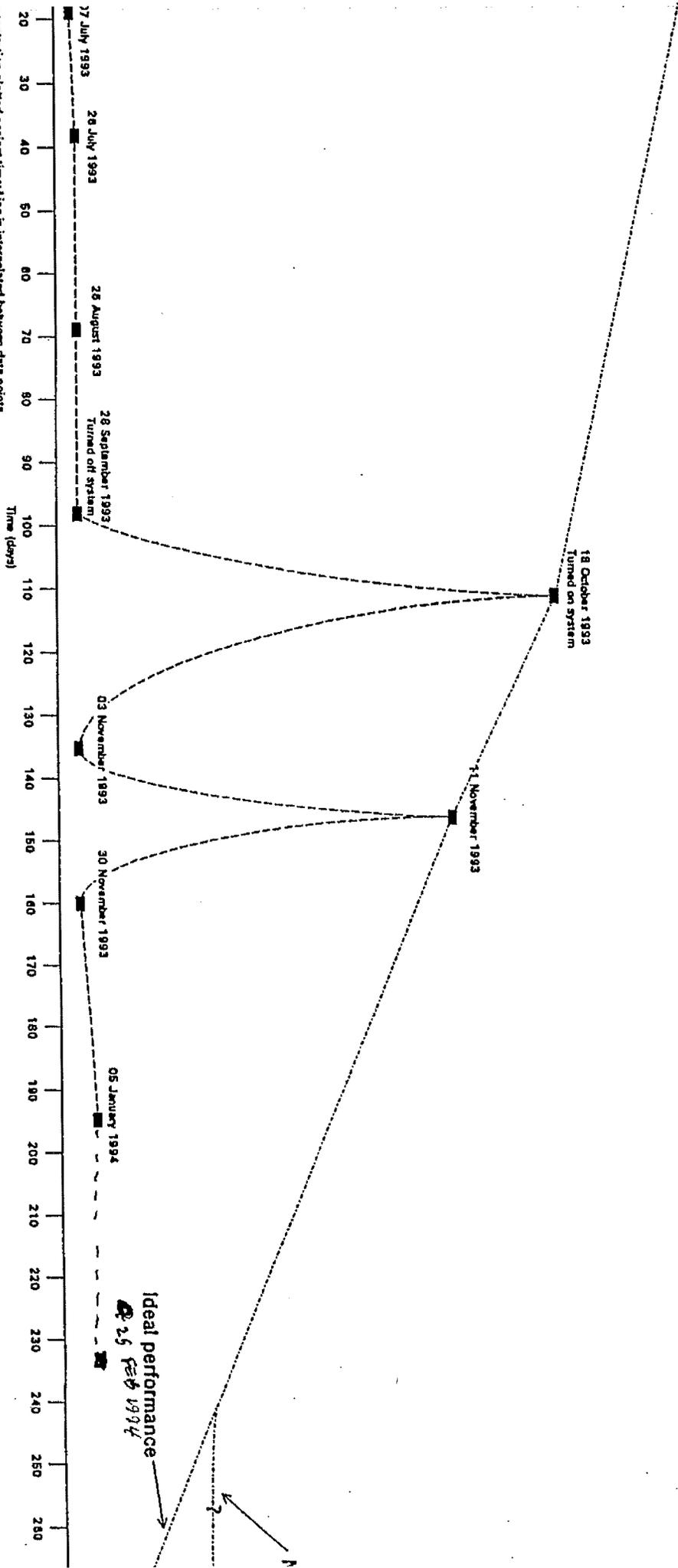
Table 4 - Historical PCE Soil Gas Recovery Monitoring Summary

Table 5 - Historical Groundwater Analytical Test Results

Appendix A - Recent Groundwater Analytical Test Results

Appendix B - Disposal of Soils and Purge Water from the former Y Pay Mor Dry Cleaners

rtup 17 June 1993



concentration plotted against time. Line is interpolated between data points.  
 bound PCE Soil-Gas concentration after system shut off/monitoring. Projected rebound concentration could lie between Non-Ideal/Ideal performance concentrations depicted.  
 approximate average PCE mass removal for 200 days, approximately 4 lbs of equivalent PCE mass/unit volume air removed

FIGURE 4

1: Graph of PCE Soil-Gas (Former Y-Pay-Mor Dryc RZA AGRA, Inc. Project



STATE OF WASHINGTON  
DEPARTMENT OF ECOLOGY

Northwest Regional Office, 3190 - 160th Ave S.E. • Bellevue, Washington 98008-5452 • (206) 649-7000

January 9, 1995

Mr. Dale Kramer  
AGRA Earth and Environmental  
11335 NE 122nd Way  
Kirkland, WA 98034-6918

Dear Mr. Kramer:

Re: Former Y Pay Mor Drycleaner  
2210 S. 320th Street, Federal Way

Thank you for submitting the Independent Remedial Action Report dated December 22, 1994 for the above facility, and for opting to participate in the Independent Remedial Action Program (IRAP). A screening review will occur within 90 days to determine the completeness of the submitted information.

The Department of Ecology (Ecology) will publish the receipt of this report in the Site Register, which is a bi-weekly publication regarding sites undergoing cleanup or remedial actions throughout the state. Your request for Ecology review of the independent remedial action will also be noted in the Site Register.

Enclosed is a receipt for your \$1,000 deposit and a copy of the Independent Remedial Action Report Request for Review form. Please refer to the TCP identification number printed on the bottom right-hand corner of this form on all correspondence relating to this project.

Please call me at (206) 649-7042 if you have any questions or comments.

Sincerely,

Elaine P. Atkinson  
Toxics Cleanup Program

EPA:ea:bn  
Enclosures

**From** Elaine Atkinson  
Dept. of Ecology  
3190-160th Ave SE  
Bellevue, WA 98008-5452

INCLUDE  
MAIL  
STOPS



**ECON-O-GRAM**  
"To Provide Faster Service  
at Lower Cost"

**To** The Norman Company  
1420 Fifth Ave, Suite 3600  
Seattle, WA 98101-2344  
Attn: Nony

**Subject**

FILE #

Y Pay Mar Laundry/  
Trust Acct. for Tricenter  
Assoc (W-17-5295-000)

PLEASE  
REPLY BY:

NO REPLY  
REQUIRED

**Message**

FOLD

I am returning this check to you because  
the entire fee for the review of the remediation  
at the subject site has been paid by the environmental  
consulting firm AGRA Earth: Environmental.

FOLD

SIGNATURE

Elaine Atkinson

PHONE NO.

649-7042

DATE

5/8/95

**Reply**

SIGNATURE

PHONE NO.

DATE

**From** Elaine Atkinson  
WA Dept. of Ecology  
3190 - 160th Ave  
Bellevue WA 98008-5452

INCLUDE  
MAIL  
STOPS



REGISTRATION  
"To Provide Faster Service  
at Lower Cost"

**To** Marilyn  
Federal Way Fire Dept.  
31617 - 1st Ave S.  
Federal Way, WA 98003

**Subject** Y Pay Mor Dry Cleaner  
FILE #  
 PLEASE REPLY BY:  
 NO REPLY REQUIRED

**Message** Please send copies of the incident report  
91-3830 and 91-4928 to my attention at the  
above address. Thanks for your assistance!

FOLD

FOLD

SIGNATURE C. Atkinson PHONE NO. (206) 649-7042 DATE 3/30

**Reply**

SIGNATURE PHONE NO. DATE

FEDERAL WAY FIRE DEPARTMENT  
INCIDENT 3830 - 0 (ACTIVITY 103719 )  
PAGE NO. 1  
AUG 13, 1991

RECEIVED  
RECEIVED APR 7 1995  
APR 10 1995 DEPT. OF ECOLOGY

FIRE INCIDENT REPORT

SECTION A - COMPLETE FOR ALL INCIDENTS  
FDID 17D39 INCIDENT NUMBER 3830 - 0 MULTIAGENCY NO. 0  
DATE 8/06/91 DISPATCH TIME 1211 ARRIVAL TIME 1215 END TIME 1635  
ADD DAYS 0 FIRST IN COMPANY 914 DISTRICT 1961F  
PROPERTY MANAGEMENT 1 AUTOMATIC OR MUTUAL AID 1 METHOD OF ALARM 7  
SITUATIONS FOUND 42 0 0 0 ACTIONS TAKEN 16 61 63 64  
WEATHER 1 AIR TEMPERATURE 0 CENSUS 0300.00  
INCIDENT ADDRESS/LOCATION 2210 S 320 ST FW  
ROOM/APARTMENT ZIP CODE 98003- FIRE HAZARD ZONE 0  
PEOPLE INVOLVED:  
CODE 00 NAME CHANG, SOO KANG DOB / / 0  
ADDRESS 14617 27 AVE E. TACOMA 98445 PHONE (206) 281-2369  
CODE NAME DOB / / 0  
ADDRESS PHONE ( ) - 0  
RESPONDED: PAID 21 VOLUNTEER 0 ENGINE 4 TRUCK 1 AERIAL 0  
CMND 4 EMS 3 TANKER 0 RESCUE 0 HAZMAT 0 OTHER 1  
GENERAL PROPERTY USE 52 SPECIFIC PROPERTY USE 796 OCCUPANCY TYPE B2  
STRUCTURE STATUS 2 OCCUPIED AT TIME OF INCIDENT 1  
MOBILE PROPERTY INVOLVED:  
TYPE 98 VEHICLE LICENSE STATE  
YEAR 0 MAKE MODEL  
ICC/DOT PERMIT VIN

SECTION B - COMPLETE FOR CASUALTIES

FIRE SERVICE INJURIES 0 FIRE SERVICE FATALITIES 0  
NON-FIRE SERVICE INJURIES 0 NON-FIRE SERVICE FATALITIES 0

SECTION C - COMPLETE FOR ALL FIRES

CONTRIBUTING FACTORS 0 0 AREA OF FIRE ORIGIN 0 LEVEL OF FIRE ORIGIN  
FROM TRAVELED SURFACE 0 FORM OF HEAT OF IGNITION 0 IGNITION FACTOR 0  
CONTRIBUTING PERSONS #1 SEX/DOB / / 0 #2 SEX/DOB / / 0  
TYPE OF MATERIAL FIRST IGNITED 0 FORM OF MATERIAL FIRST IGNITED 0  
METHOD OF EXTINGUISHMENT 0 PROPERTY LOSS 0 CONTENTS 0  
VEHICLE MODEL ACRES BURNED 0.0  
EQUIPMENT INVOLVED:  
TYPE 0 MODEL YEAR 0  
MAKE SERIAL NO

SECTION D - COMPLETE FOR ALL STRUCTURE FIRES

CONSTRUCTION TYPE 0 ROOF COVERING 0 NUMBER OF STORIES 0  
FLAME DAMAGE 0 SMOKE DAMAGE 0 TYPE OF MATERIAL GENERATING MOST SMOKE 0  
FORM OF MATERIAL GENERATING MOST SMOKE 0 AVENUE OF SMOKE TRAVEL 0  
DETECTION SYSTEM TYPE 0 POWER 0 PERFORMANCE 0 REASON FOR FAILURE 0  
EXTINGUISHER SYSTEM: TYPE 0 PERFORMANCE 0 REASON FOR FAILURE 0  
SPRINKLER HEADS: TYPE 0 NUMBER ACTIVATED 0

SECTION E - COMPLETE FOR EMS

SITUATIONS FOUND 0 0 0 0 NUMBER OF PATIENTS 0  
HIGHEST LEVEL OF CARE PROVIDED: FIRE 0 OTHER 0  
TRANSPORTED BY: PVT AMB 0 PUB AMB 0 FIRE DEPT 0 OTHER 0

(X) 17

GENERAL FIRE DEPARTMENT  
INCIDENT 3830 - 0 (ACTIVITY 103719 )  
PAGE NO. 1  
AUG 13, 1991

FIRE INCIDENT REPORT

SECTION F - COMPLETE FOR HAZMAT

AREA OF RELEASE 26      LEVEL OF RELEASE A01      RELEASE FACTORS 50 0 0 0  
EST CHEMICALS RELEASED 1      EQUIPMENT INVOLVED 16      ACTIONS TAKEN 0 33 42 46  
DISPOSITION OF INCIDENT 7      IDENTIFICATION SOURCES USED 11 71 77 89  
FIRE SERVICE INJURIES 2      FIRE SERVICE FATALITIES 0  
NON-FIRE SERVICE INJURIES 5      NON-FIRE SERVICE FATALITIES 0  
HAZARDOUS MATERIAL IDENTIFIED:  
NAME TETRACHLOROETHYLENE DOT ID 1897 DOT HAZARD CLASS 9      CAS NO. 127-18-4  
STATE STORED 2      STATE RELEASED 2      QUANTITY RELEASED 10      UNITS 13  
CONTAINER: TYPE 10      MATERIAL 0      DESC 1      CONSTRUCTION 0      CAPACITY 40      UNITS 0

SECTION G - COMPLETE IF OTHER THAN FIRE OR SHORT REPORT

LOCAL USE  
STATE USE

SECTION H - COMPLETE FOR ALL INCIDENTS

MEMBER MAKING REPORT  
F244/THORSON, JERRY E.

OFFICER IN CHARGE  
F244/THORSON, JERRY E.

SIGNATURE \_\_\_\_\_

SIGNATURE \_\_\_\_\_

REVIEWED BY \_\_\_\_\_

COPY

## FIRE INCIDENT REPORT

## NARRATIVE

INCIDENT # 91-3830 ADDRESS 2210 So 320 St.

E 914 originally responded to an odor investigation at "Y-Pay-More" cleaners. Upon arrival they found a very strong chemical odor and felt slightly dizzy. They evacuated the occupancy and called for help. Upon 906's arrival found cleaners evacuated and was told a cleaning agent called "Perk" had spilled into and overflowed a 5 gallon plastic bucket. 906 assumed command, called for a Haz. Mat. unit from P.O.S. and F.W. off duty Haz Mat. team. Evacuated Living Well Lady a Salon and Partytime occupancies due to odors in those occupancies. Called for Puget Power to shut off electricity due to explosion concerns. Called supplier of Perk to obtain MSDS ~~and~~ which they "faxed" to Sta. 2. 912 officer assigned staging, 903 became Planning, 702 was Safety, 906 I.C. Capt. Kettenring assigned Decon and 932 Div. C. (at rear for scene security until 135 took over) KCP Sgt. Thomas was Police Liason in C.P. Set up CP at front decon and staging areas also were in the front. M.S.O. Herbert was Med Com with M8 and 931 treating patients. Two firefighters and three civilians were ~~are~~ originally treated and later 932 treated 2 more civilians. After P.O.S. 717 arrived and all equipment was ready an entry team entered in Level C protective clothing and cleaned up the spill by using absorbant materials and placed all of the contaminants

FIRE INCIDENT REPORT

NARRATIVE

INCIDENT # 91-3830 ADDRESS 2210 So 320 St.

After the entry team left the building they were decontaminated and checked out by Med. Com.

The occupant Chang, Soo Kang called ChemPro to clean the building and remove the decon pools etc. B906 and E914 remained until Chempro advised the occupancy was cleaned. All units returned leaving final clean-up and decon with ChemPro.

JET



STATE OF WASHINGTON  
DEPARTMENT OF ECOLOGY

Northwest Regional Office, 3190 - 160th Ave S.E. • Bellevue, Washington 98008-5452 • (206) 649-7000

April 20, 1995

Mr. Tim Peters  
AGRA Earth and Environmental  
11335 N.E. 122nd Way  
Kirkland, WA 98034-6918

Dear Mr. Peters:

Re: Independent Remedial Action  
Former Y Pay Mor Dry Cleaner, Federal Way

The Toxics Cleanup Program has completed a screening of the remedial action report submitted for the former "Y Pay Mor" dry cleaner site located at 2210 S. 320th Street in Federal Way, Washington. The available information is apparently adequate to make a final determination regarding site disposition. This determination will be made after the review fee balance is received.

Please submit payment of the fee balance of \$1,000, payable to the Department of Ecology (Ecology), to my attention at the above address. Please use the Ecology identification number for your site (N-17-5295-000) on all correspondence, to ensure proper crediting of your fee.

Following the final review of your work, you will receive a written determination from Ecology regarding the independent remedial actions you have performed. This determination can take two forms, a "no further action" designation, or a determination that the remedial action is incomplete.

If you receive an incomplete notice, insufficiencies with your remedial action will be detailed. You will then have the option of resubmitting your report for a screening review once the identified deficiencies have been addressed.

If you choose to address the insufficiencies identified with your work, and resubmit the report to Ecology, you may be required to resubmit payment of the deposit and applicable review fee for the additional remedial actions.

Mr. Tim Peters  
April 20, 1995  
Page 2

Please contact me at (206) 649-7042 if you have any questions regarding this process.

Sincerely,

A handwritten signature in cursive script that reads "Elaine P. Atkinson". The signature is written in dark ink and has a long horizontal flourish extending to the right.

Elaine P. Atkinson  
Environmental Scientist

EPA:ea:gm



RECEIVED  
APR 26 1995  
DEPT. OF ECOLOGY

AGRA Earth &  
Environmental, Inc.  
11335 NE 122nd Way  
Suite 100  
Kirkland, Washington  
U.S.A. 98034-6918  
Tel (206) 820-4669  
Fax (206) 821-3914

25 April 1995  
11-07883-11

Washington Department of Ecology  
Northwest Regional Office  
3190 160th Avenue SE  
Bellevue, Washington 98008-5452

Attention: Ms. Elaine Atkinson  
  
Subject: Former Y Pay Mor Dry Cleaner  
Ecology Site Identification No. N-17-5295-000  
Federal Way, Washington

Dear Ms. Atkinson:

Please find enclosed a check for the balance of the IRAP review fee for the above referenced site. Should you have any questions regarding the IRAP report or other aspects of this project, please contact me at (206) 820-4669.

Respectfully submitted,  
AGRA Earth & Environmental, Inc.

A handwritten signature in blue ink, appearing to read 'Timothy J. Peter', written over a horizontal line.

Timothy J. Peter, P.G.  
Sr. Project Environmental Geologist

A handwritten signature in blue ink, appearing to read 'Daryl S. Petrarca', written over a horizontal line.

Daryl S. Petrarca, R.E.A.  
Associate



**AGRA**  
**Earth & Environmental**  
11335 NE 122nd Way  
Suite 100  
Kirkland, WA 98034-0918  
Tel (206) 820-4669  
Fax (206) 821-3914

**FACSIMILE COVER SHEET**

To: *Elaine Atkinson*  
Company: *WDOE - NWRO*  
Fax: *649-7098*  
From: *Tim Peter*

Date: *5/31/85*  
Project No.: *11-07883-12*  
No. of Pages: *6* (including cover sheet)

This fax is only intended for the Addressee. It may contain privileged or confidential information. Any unauthorized disclosure is strictly prohibited. If you have received this transmission in error, please notify us immediately (collect) so that we may correct our transmission. Please then destroy the original. Thank you.

Comments:

**Announcements:** AGRA Earth & Environmental recently opened an office in San Antonio.

*Providing Geotechnical, Environmental and Materials Testing Services World Wide*

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- Red Deer•Regina•Sacramento•Salt Lake City•San Diego•Santiago•Sarina•Saskatoon•Scarborough•
- Sparks•Spokane•Talpei•Tucson•Victoria•Waterloo•Windsor•Winnipeg•Yellowknife•



AGRA Earth & Environmental Inc.  
7477 SW Tech Center Drive  
Portland, Oregon  
U.S.A. 97223-8025  
Tel (503) 639-3400  
Fax (503) 620-7892

December 1, 1994

AGRA Earth & Environmental  
11335 NE 122nd Way, Suite 100  
Kirkland, WA 98034

Attention: Mr. Dale Kramer

Dear Mr. Kramer:

RE: Analytical Results For Project 11-07883-11

Attached are the results for the samples submitted on November 22, 1994 from the above referenced project. For your reference, our project number associated with these samples is WA940810.

The samples were analyzed for volatile organic halocarbons at the AGRA Earth & Environmental Portland Chemistry Laboratory.

All analyses were conducted in accordance with applicable QA/QC guidelines. The results apply only to the samples submitted.

Please feel free to contact me if you have any questions regarding this report, or if I can be of any assistance in any other matter.

Respectfully submitted,

AGRA Earth & Environmental

A handwritten signature in black ink that reads "Sean Gormley". The signature is written in a cursive style with a long, sweeping underline.

Sean Gormley  
Laboratory Manager



Project: Y Pay Mor  
 Project No.: 11-07883-11  
 Project Manager: Dale Kramer  
 Sample Matrix: Soil

Service Request No.: WA940819  
 Report Date: 12/1/94  
 Report No.: 94081901  
 C.O.C. No.: 00242

Volatile Organic Halocarbons  
 EPA Method 8010  
 mg/kg(ppm)

Sample Name: Lab Code:	B1/S1 0819-1	B2/S1 0819-2	B3/S1 0819-3	B4/S1 0819-4	B5/S1 0819-5	Method Reporting Limit
Chloromethane	ND	ND	ND	ND	ND	0.1
Vinyl Chloride	ND	ND	ND	ND	ND	0.1
Bromomethane	ND	ND	ND	ND	ND	0.5
Chloroethane	ND	ND	ND	ND	ND	0.5
Trichlorofluoromethane	ND	ND	ND	ND	ND	0.1
1,1-Dichloroethene	ND	ND	ND	ND	ND	0.1
Methylene Chloride	ND	ND	ND	ND	ND	0.1
T-1,2-Dichloroethene	ND	ND	ND	ND	0.50	0.1
1,1-Dichloroethane	ND	ND	ND	ND	ND	0.1
C-1,2-Dichloroethane	ND	ND	0.11	0.33	71(a)	0.1
Chloroform	ND	ND	ND	ND	ND	0.1
1,1,1-Trichloroethane (TCA)	ND	ND	ND	ND	ND	0.1
Carbon Tetrachloride	ND	ND	ND	ND	ND	0.1
1,2-Dichloroethane (EDC)	ND	ND	ND	ND	ND	0.1
Trichloroethene (TCE)	ND	ND	ND	ND	ND	0.1
1,2-Dichloropropane	ND	ND	ND	ND	ND	0.1
Bromodichloromethane	ND	ND	ND	ND	ND	0.1
2-Chloroethylvinyl ether	ND	ND	ND	ND	ND	0.1
T-1,3-Dichloropropene	ND	ND	ND	ND	ND	0.1
C-1,3-Dichloropropene	ND	ND	ND	ND	ND	0.1
1,1,2-Trichloroethane	ND	ND	ND	1.3	ND	0.1
Tetrachloroethene (PCE)	ND	ND	ND	ND	ND	0.1
Dibromochloromethane	ND	ND	ND	ND	ND	0.1
1,2-Dibromoethane (EDB)	ND	ND	ND	ND	ND	0.1
Chlorobenzene	ND	ND	ND	ND	ND	0.1
Bromoform	ND	ND	ND	ND	ND	0.1
1,1,2,2-Tetrachloroethane	ND	ND	ND	ND	ND	0.1
1,3-Dichlorobenzene	ND	ND	ND	ND	ND	0.1
1,4-Dichlorobenzene	ND	ND	ND	ND	ND	0.1
1,2-Dichlorobenzene	ND	ND	ND	ND	ND	0.1
Sample Date:	11/16/94	11/16/94	11/16/94	11/16/94	11/16/94	
Extraction Date:	11/23/94	11/23/94	11/23/94	11/23/94	11/23/94	
Analysis Date:	11/29/94	11/29/94	11/29/94	11/29/94	11/29/94	

ND Not Detected  
 (a) Result is from a 1:20 dilution analyzed on 11/30/94.

Project: Y Pay Mor  
 Project No.: 11-07883-11  
 Project Manager: Dale Kramer  
 Sample Matrix: Soil

Service Request No.: WA940619  
 Report Date: 12/1/94  
 Report No.: 94081902  
 C.O.C. No.: 00242

**Volatile Organic Halocarbons**  
**EPA Method 8010**  
**mg/kg(ppm)**

Sample Name: Lab Code:	B6/S1 0619-6	B7/S1 0619-7	Lab Blank 0619-MB	Method Reporting Limit
Chloromethane	ND	ND	ND	0.1
Vinyl Chloride	ND	ND	ND	0.1
Bromomethane	ND	ND	ND	0.5
Chloroethane	ND	ND	ND	0.5
Trichlorofluoromethane	ND	ND	ND	0.1
1,1-Dichloroethane	ND	ND	ND	0.1
Methylene Chloride	ND	ND	ND	0.1
T-1,2-Dichloroethane	ND	ND	ND	0.1
1,1-Dichloroethane	ND	ND	ND	0.1
C-1,2-Dichloroethane	ND	0.75	ND	0.1
Chloroform	ND	ND	ND	0.1
1,1,1-Trichloroethane (TCA)	ND	ND	ND	0.1
Carbon Tetrachloride	ND	ND	ND	0.1
1,2-Dichloroethane (EDC)	ND	ND	ND	0.1
Trichloroethane (TCE)	ND	ND	ND	0.1
1,2-Dichloropropane	ND	ND	ND	0.1
Bromodichloromethane	ND	ND	ND	0.1
2-Chloroethylvinyl ether	ND	ND	ND	0.1
T-1,3-Dichloropropane	ND	ND	ND	0.1
C-1,3-Dichloropropane	ND	ND	ND	0.1
1,1,2-Trichloroethane	ND	ND	ND	0.1
Tetrachloroethane (PCE)	ND	ND	ND	0.1
Dibromochloromethane	ND	ND	ND	0.1
1,2-Dibromoethane (EDB)	ND	ND	ND	0.1
Chlorobenzene	ND	ND	ND	0.1
Bromoform	ND	ND	ND	0.1
1,1,2,2-Tetrachloroethane	ND	ND	ND	0.1
1,3-Dichlorobenzene	ND	ND	ND	0.1
1,4-Dichlorobenzene	ND	ND	ND	0.1
1,2-Dichlorobenzene	ND	ND	ND	0.1
Sample Date:	11/16/94	11/16/94	11/23/94	
Extraction Date:	11/23/94	11/23/94	11/23/94	
Analyse Date:	11/29/94	11/29/94	11/29/94	

ND Not Detected

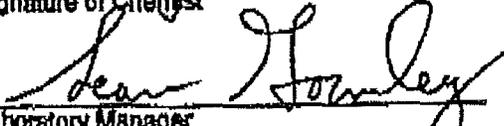
ANALYSIS  
EPA Method 8010

Surrogate Recoveries:

Sample Name:	B1/S1	B2/S1	B3/S1	B4/S1	B5/S1	Control Limits
Lab Code:	0619-1	0619-2	0619-3	0619-4	0619-5	
Date Analyzed:	11/29/84	11/29/84	11/29/84	11/29/84	11/29/84	
Bromochloromethane:	75.8%	77.5%	80.3%	80.2%	85.8%	60%-124%
1,4 - Dichlorobutane:	87.6%	94.8%	87.0%	91.2%	88.3%	59%-125%

Sample Name:	B5/S1	B6/S1	B7/S1	Lab Blank	Control Limits
Lab Code:	0619-5	0619-6	0619-7	0619-MB	
Date Analyzed:	11/30/84	11/29/84	11/29/84	11/29/84	
Bromochloromethane:	105%	99.0%	88.5%	75.2%	60%-124%
1,4 - Dichlorobutane:	91.6%	93.6%	82.7%	88.8%	59%-125%

  
Signature of Chemist

  
Laboratory Manager

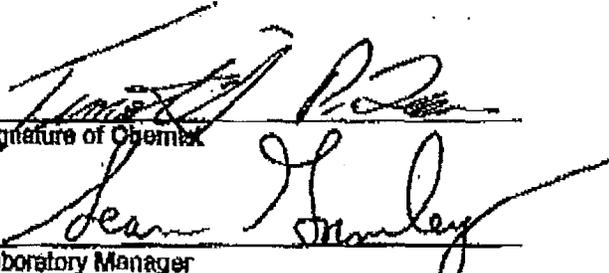
Project: Y Pay Mor  
 Project No.: 11-07883-11  
 Project Manager: Dale Kremer  
 Sample Matrix: Soil

Service Request No.: WA940519  
 Report Date: 12/1/94  
 Report No.: 94081903  
 C.O.C.: 00242

QC Data Report  
 Volatile Organic Compounds  
 EPA Method 8010  
 mg/kg(ppm)

Sample Name:	B4/S1	Spike Level (mg/kg)	Matrix Spike	% Rec. (MS)	Matrix Spike Duplicates	% Rec. (DMS)	EPA % Recovery Acceptance Criteria	Relative Percent Difference (RPD)
Vinyl Chloride	ND	2.5	3.0	120	2.8	112	28%-183%	6.8
1,1-Dichloroethene	ND	2.5	2.9	116	2.9	116	28%-167%	<1.0
Trichloroethene	ND	2.5	2.4	96	2.6	104	35%-148%	8.0
Tetrachloroethene	1.3	2.5	3.8	100	4.0	108	26%-162%	7.7
Chlorobenzene	ND	2.5	2.5	100	2.3	92	36%-150%	8.3
1,4-Dichlorobenzene	ND	2.5	2.5	100	2.5	100	42%-143%	<1.0
Sample Date:	11/16/94	~	11/16/94	~	11/16/94	~	~	~
Extraction Date:	11/23/94	~	11/23/94	~	11/23/94	~	~	~
Analysis Date:	11/29/94	~	11/29/94	~	11/29/94	~	~	~
Surrogate Recovery:							Control Limits	
Bromochloromethane:	80.2%	~	92.8%	~	92.9%	~	80%-124%	
1,4-Dichlorobutane:	91.2%	~	97.9%	~	102%	~	59%-126%	

> Not Detected

  
 Signature of Chemist  
 Laboratory Manager

DEPARTMENT OF ECOLOGY  
NORTHWEST REGIONAL OFFICE  
FACSIMILE COVER SHEET

Sent



DATE: \_\_\_\_\_

TIME: \_\_\_\_\_

Number of Pages: 2 **Plus** Cover Sheet

TO: Jeff Myers  
\_\_\_\_\_  
\_\_\_\_\_

FAX # 340-8856

FROM: Elaine Atkinson

PHONE: 649-7042 SECTION: TCR

Department of Ecology  
Northwest Regional Office  
3190 - 160th Avenue S.E.  
Bellevue, WA 98008-5452  
Phone: (206) 649-7000  
Fax: (206) 649-7098  
SCAN 354-7098

COMMENTS: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_



Draft

STATE OF WASHINGTON  
DEPARTMENT OF ECOLOGY

Northwest Regional Office, 3190 - 160th Ave S.E. • Bellevue, Washington 98008-5452 • (206) 649-7000

May 31, 1995

Ms. Melody Westerdal  
The Norman Company  
1420 Fifth Avenue  
Suite 3600  
Seattle, WA 98101-2344

Dear Ms. Westerdal:

Re: Independent Remedial Action Report  
Former Y Pay Mor Dry Cleaner, Federal Way, WA

Thank you for submitting the results of your independent remedial action for Department of Ecology (Ecology) review. Ecology appreciates your initiative in pursuing this administrative option under the Model Toxics Control Act (MTCA).

Ecology's Toxics Cleanup Program has reviewed the following AGRA Earth and Environmental (formerly RZA AGRA) reports for the former Y Pay Mor Dry Cleaner at 2210 South 320th Street in Federal Way, Washington:

1. Preliminary Remedial Investigation, dated November 1992.
2. Remediation System Installation, dated October 1993.
3. Soil Vapor Extraction Remediation System, Performance Monitoring Record, dated February 7, 1994.
4. Independent Remedial Action Report, dated December 22, 1994.

Miscellaneous information in Ecology Central Files was also reviewed.

Based upon review of the above-listed information, Ecology has determined that the completed investigations and the remediation of contaminated soil and groundwater at the former Y Pay Mor facility are reasonable approaches for addressing the identified contamination. No further sampling within the on-site building appears to be warranted at this time. However, because contaminants remain on the property at concentrations above MTCA cleanup levels, a restrictive covenant must be recorded with the property deed at the office of the King County Clerk.

DRAFT

Ms. Meloday Westerdal  
May 31, 1995  
Page 2

The restrictive covenant must include the following information:

1. Notice must be provided of the presence of cis-1,2-dichloroethene and tetrachloroethene at concentrations above MTCA cleanup levels in soil at confirmation boring B-4 and B-5 locations.
2. Provisions must be included in the restrictive covenant for notice to Ecology or its successor agency when on-site activity that may interfere with the remedial action is planned, or when the owner intends to convey any interest in the site.
3. The restrictive covenant should also provide for the right of Ecology or its successor agency to enter the property at reasonable times to evaluate compliance with the terms of the covenant, to take samples and to inspect records related to the remedial action.
4. Finally, the restrictive covenant should provide for the owner of the property or his "assign and successor in interest" the right to record an instrument which provides that the restrictive covenant will no longer limit use of the property or "be of any further force or effect". This may be recorded only with the consent of Ecology or its successor agency. Note that final confirmational sampling would be required within the building area prior to recording this instrument.

Please note that this interim letter refers only to the releases of cis-1,2-dichloroethene, trichloroethene, 1,1,2,2-tetra-chloroethane, and tetrachloroethene identified in the above-listed documents. It does not apply to any other release or potential release at the property, any other areas on the property, nor any other properties owned or operated by Y Pay Mor Dry Cleaners, the Norman Company, or the Northwest Building Corporation.

Ecology does not assume any liability for any release, threatened release or other conditions at the site, or for any actions taken or omitted by any person or his/her agents or employees with regard to the release, threatened release, or other conditions at the site.

Please contact me at (206) 649-7042 if you have any questions regarding this letter.

Sincerely,

  
Elaine P. Atkinson  
Environmental Scientist

DRAFT

EPA:ea:bn

cc: Jeffrey S. Myers, Attorney at Law  
Daryl S. Petrarca, AGRA Earth and Environmental



Draft

STATE OF WASHINGTON  
DEPARTMENT OF ECOLOGY

Northwest Regional Office, 3190 - 160th Ave S.E. • Bellevue, Washington 98008-5452 • (206) 649-7000

May 31, 1995

Ms. Melody Westerdal  
The Norman Company  
1420 Fifth Avenue  
Suite 3600  
Seattle, WA 98101-2344

Dear Ms. Westerdal:

Re: Independent Remedial Action Report  
Former Y Pay Mor Dry Cleaner, Federal Way, WA

Thank you for submitting the results of your independent remedial action for Department of Ecology (Ecology) review. Ecology appreciates your initiative in pursuing this administrative option under the Model Toxics Control Act (MTCA).

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4. Independent Remedial Action Report, dated December 22, 1994.

DRAFT

Miscellaneous information in Ecology Central Files was also reviewed.

Based upon review of the above-listed information, Ecology has determined that the completed investigations and the remediation of contaminated soil and groundwater at the former Y Pay Mor facility are reasonable approaches for addressing the identified contamination. No further sampling within the on-site building appears to be warranted at this time. However, because contaminants remain on the property at concentrations above MTCA cleanup levels, a restrictive covenant must be recorded with the property deed at the office of the King County Clerk.

Based on available information

Ms. Meloday Westerdal  
May 31, 1995  
Page 2

The restrictive covenant must include the following information:

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4. Finally, the restrictive covenant should provide for the owner of the property or his "assign and successor in interest" the right to record an instrument which provides that the restrictive covenant will no longer limit use of the property or "be of any further force or effect". This may be recorded only with the consent of Ecology or its successor agency. Note that final confirmational sampling would be required within the building area prior to recording this instrument.

Please note that this interim letter refers only to the releases of cis-1,2-dichloroethene, trichloroethene, 1,1,2,2-tetra-chloroethane, and tetrachloroethene identified in the above-listed documents. It does not apply to any other release or potential release at the property, any other areas on the property, nor any other properties owned or operated by Y Pay Mor Dry Cleaners, the Norman Company, or the Northwest Building Corporation.

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Please contact me at (206) 649-7042 if you have any questions regarding this letter.

Sincerely,

  
Elaine P. Atkinson  
Environmental Scientist

DRAFT

EPA:ea:bn

cc: Jeffrey S. Myers, Attorney at Law  
Daryl S. Petrarca, AGRA Earth and Environmental

Final Draft

June 8, 1995

Ms. Melody Westerdal  
The Norman Company  
1420 Fifth Avenue  
Suite 3600  
Seattle, WA 98101-2344

Dear Ms. Westerdal:

Re: Independent Remedial Action Report  
Former Y Pay Mor Dry Cleaner, Federal Way, WA

Thank you for submitting the results of your independent remedial action for Department of Ecology (Ecology) review. Ecology appreciates your initiative in pursuing this administrative option under the Model Toxics Control Act (MTCA).

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Miscellaneous information in Ecology Central Files was also reviewed.

Based upon review of the above listed information, Ecology has determined that the completed investigations and the remediation of contaminated soil and groundwater at the former Y Pay Mor facility are reasonable approaches for addressing the identified contamination. Based on the above reports, no further sampling within the on-site building appears to be warranted. However, because contaminants remain on the property at concentrations above MTCA cleanup levels, a restrictive covenant must be recorded with the property deed at the office of the King County Clerk.

DRAFT

The restrictive covenant must include the following information:

1. Notice must be provided of the presence of cis-1,2-dichloroethene and tetrachloroethene at concentrations above MTCA cleanup levels in soil at confirmation boring B-4 and B-5 locations.
2. Provisions must be included in the restrictive covenant for the collection of groundwater samples from MW-3 twice annually over a three year period. All collected samples must be analyzed for volatile organic compounds using EPA Method 8240 or 8260. A copy of all analytical results must be forwarded to Ecology or its successor agency.
3. Provisions must be included in the restrictive covenant for notice to Ecology or its successor agency when on-site activity that may interfere with the remedial action is planned, or when the owner intends to convey any interest in the site.
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**DRAFT**

Sincerely,

Elaine P. Atkinson  
Environmental Scientist

EPA:ea:

cc: Mr. Jeffrey S. Myers, Attorney at Law  
Mr. Daryl S. Petrarca, AGRA Earth and Environmental

**DRAFT**



STATE OF WASHINGTON  
DEPARTMENT OF ECOLOGY

Northwest Regional Office, 3190 - 160th Ave S.E. • Bellevue, Washington 98008-5452 • (206) 649-7000

June 9, 1995

Ms. Melody Westerdal  
The Norman Company  
1420 Fifth Avenue  
Suite 3600  
Seattle, WA 98101-2344

Dear Ms. Westerdal:

Re: Independent Remedial Action Report  
Former Y Pay Mor Dry Cleaner, Federal Way, WA

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Based upon review of the above listed information, Ecology has determined that the completed investigations and the remediation of contaminated soil and groundwater at the former Y Pay Mor facility are reasonable approaches for addressing the identified contamination.



Ms. Melody Westerdal

Page 2

June 9, 1995

Based on the above reports, no further sampling within the on-site building appears to be warranted. However, because contaminants remain on the property at concentrations above MTCA cleanup levels, a restrictive covenant must be recorded with the property deed at the office of the King County Clerk.

The restrictive covenant must include the following information:

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Ms. Melody Westerdal  
Page 3  
June 9, 1995

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Please contact me at (206) 649-7042 if you have any questions regarding this letter.

Sincerely,



Elaine P. Atkinson  
Environmental Scientist

EPA:ea:tm

cc: Mr. Jeffrey S. Myers, Attorney at Law  
Mr. Daryl S. Petrarca, AGRA Earth and Environmental



IRAP DATA DEFINITIONS FOR SIS DATA INPUT

Site Name: Y Pay Mor Drycleaner

SIS Number: N-17-5295-000

LUST Number: N/A

IRRP - Independent Review Paid

Start date: 1/6/95

Completion date: 6/8/95

Status (in process, completed or cancelled): completed

IRRU - Independent Report Unpaid

Start date:

Completion date:

Status (in process, completed or cancelled)

IRAP Table

TCP ID: N-17-5295-000

Review results (1 = no further action; 2 = further cleanup action needed; 3 = incomplete report received; 4 = interim status letter sent): 4

NFA Status Codes (1 = no further action after assessment; 2 = removal from the Hazardous Sites List; 3 = referred to another Ecology program; 4 = referred to another agency; 5 = referred to local gov't; 6 = cleaned up under prior authority; 7 = cleanup conducted, not on HSL): N/A

Review fee: \$2,000

Total hours: 26 + 1 (SIS) = 27

Cleanup conducted?: Y

Cleanup permanent? (Y, N or X for N/A): Partially

Comply w/ cleanup standard? (Y, N or X for N/A): Y

Reg. = 30  
Comp. = 9

LAW OFFICES

SHORT CRESSMAN & BURGESS P.L.L.C.

PAUL R. CRESSMAN, SR., P.S.  
JOHN O. BURGESS  
BRIAN L. COMSTOCK  
ROBERT E. HEATON  
JOHN H. STRASBURGER  
JAMES A. OLIVER  
DAVID R. KOOPMANS  
KENNETH I. MYER  
ROBERT J. SHAW  
PAUL R. CRESSMAN, JR.  
ANDREW W. MARON  
CHRISTOPHER J. SOELLING  
PAUL J. DAYTON  
BRYAN P. COLUCCIO  
ROBERT E. HIBBS  
CHRISTOPHER R. OSBORN  
MICHAEL R. GARNER  
DAVID F. BRESKIN  
SCOTT A. SMITH  
THOMAS W. READ  
STEPHEN P. CONNOR  
SUSAN THORBROGGER  
SCOTT M. MISSALL  
LISA WOLFARD

999 THIRD AVENUE, SUITE 3000  
SEATTLE, WASHINGTON 98104-4088  
FAX: (206) 340-8856  
(206) 682-3333

July 11, 1997

KERRY S. BUCKLIN\*  
STEPHAN J. FRANCES  
ANN T. WILSON  
WILLIAM A. BURGE  
KAREN A. GROEN  
CLAUDIA L. CRAWFORD  
WALTER H. OLSEN, JR.  
ALISON WACHTERMAN  
JOHN D. SULLIVAN  
CONNIE SUE MANOS MARTIN  
GRAEHM C. WALLACE  
JENNIFER DIKE  
CHRIS FARIAS  
\* MEMBER OF PATENT BAR,  
USPTO

KENNETH P. SHORT  
DOUGLAS R. HARTWICH  
SAMUEL S. CHUNG  
OF COUNSEL

JOSEF DIAMOND  
COUNSEL TO THE FIRM

Ms. Elaine P. Atkinson  
Environmental Scientist  
Toxics Cleanup  
Department of Ecology  
3190 - 106th S.E.  
Bellevue, WA 98008-5452

Re: *Sea-Tac Plaza; Former Y Pay Mor Dry Cleaner, Federal Way, Washington*

Dear Ms. Atkinson:

We represent the Sea-Tac Plaza Corporation in connection with the former Y Pay Mor Dry Cleaner site in Federal Way, Washington. We have enclosed for your review a draft Declaration of Restrictive Covenants that incorporates the provisions set forth in your draft interim letter issued on June 8, 1995.

We have also enclosed a copy of AGRA's February 28, 1997 report setting forth the results of the February groundwater sampling. The next sampling event is scheduled for this month. Our understanding is that the groundwater monitoring requirements will be set forth in a final no further action letter.

We will forward the July groundwater sampling results to you as soon as we receive them. After you have had a chance to review the enclosed materials, please call me so that we may discuss finalizing the Declaration of Restrictive Covenants and issuance of a final no further action letter.

Sincerely,



Alison Wachterman

AW:jmb  
Enclosures  
cc: Lita Johnson

Short Cressman & Burgess P.L.L.C.  
Attn: Alison Wachterman  
3000 First Interstate Center  
999 Third Avenue  
Seattle, WA 98104-4008

**DRAFT**

Document Title	Declaration of Restrictive Covenants
Reference Number(s) of Related Documents	
Grantor	SeaTac Plaza Corporation
Grantee	
Legal Description	Space A-6, 2210 S 320th Street, Federal Way, Washington
Additional Legal Description is on Page	1
Assessor's Property Tax Parcel Account Number(s)	

KNOW ALL MEN BY THESE PRESENTS that SeaTac Plaza Corporation, (hereinafter referred to as "Owner"), being the Owner in fee simple of that certain real property situate in the City of Federal Way, County of King, and State of Washington bounded and described as follows (hereinafter referred to as the "Premises"):

That property commonly known as Space A-6, 2210 S 320th Street, Federal Way, Washington, located within Lot 2 as delineated on King County Short Plat No. 1079107, recorded under King County Recording No. 7912260667, being a portion of Tract A, Evergreen Plaza, a Planned Unit Development, according to the plat thereof recorded in Volume 100 of Plats, pages 74 and 75, in King County, Washington.

hereby declares and establishes the following restrictive covenants on the Premises.

The Premises has been the subject of an Independent Remedial Action under Chapter 70.105D RCW, the Model Toxics Control Act ("MTCA"). This Declaration of Restrictive Covenants is required by the Washington State Department of Ecology (hereinafter referred to as "Ecology") under WAC 173-340-440 because the Independent Remedial Action Cleanup conducted on the Premises resulted in residual concentrations of two contaminants

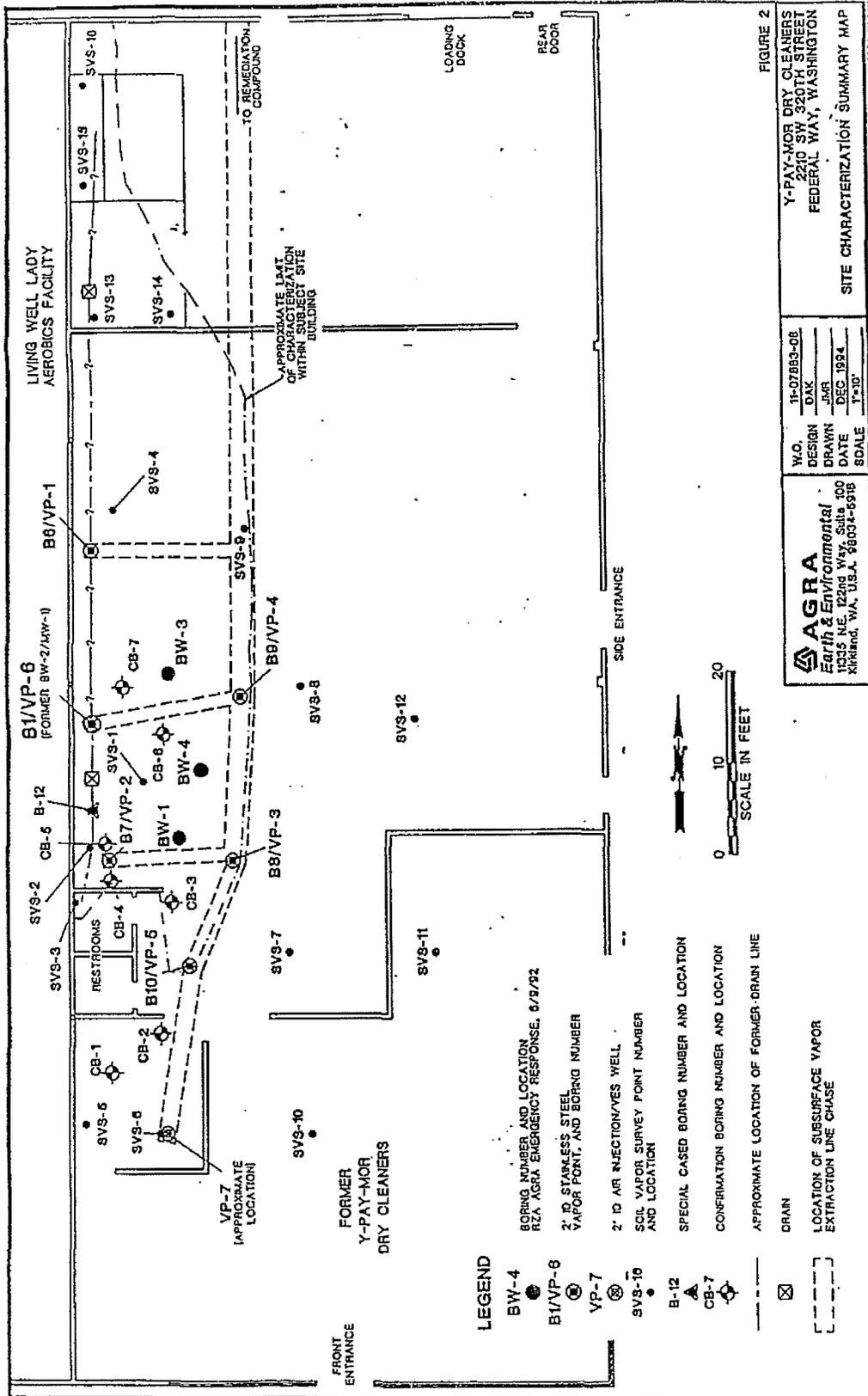
above MTCA cleanup levels in the soil in two specific locations located under the building foundation.

These covenants shall run with the land and shall be binding upon the Owner and all persons who may later become the owner or owners of the Premises or any part thereof and all parties claiming under them in perpetuity, provided however, that such covenants may be removed by an instrument in writing, recorded in the land records where the deed of the Premises is required to be recorded, and signed by the Owner (or the person or persons who are at the time of the instrument the owner or owners of the Premises) and also signed on behalf of Ecology or such other agency of the State of Washington which at the time fulfills the functions of the Department of Ecology.

The restrictive covenants hereby declared and established are as follows:

1. The map of the Premises attached to this instrument and marked Exhibit A shows the locations of confirmation borings CB-4 and CB-5 considered at the time of the execution of this instrument to contain levels of cis-1,2-dichloroethene and tetrachloroethane in soil at concentrations above MTCA cleanup levels.
2. No person shall engage in any activities on the Premises that may interfere with the remedial action without prior notice to Ecology or its successor agency.
3. The owner of the Premises shall give notice to Ecology, or its successor agency, of the owner's intent to convey any interest in the Premises.
4. Ecology or its successor agency shall have the right to enter the Premises upon notice at reasonable times for the purposes of evaluating compliance with the terms of these restrictive covenants, to take samples, and to inspect records related to the remedial action.
5. These restrictive covenants may be removed and shall be of no further force or effect and no longer limit the use of the Premises by an instrument in writing, recorded in the land records where the deed of the Premises is required to be recorded, and signed by the Owner (or the person or persons who are at the time of the instrument the owner or owners of the Premises) and Ecology (or such other agency of the State of Washington which at the time fulfills the functions of the Department of Ecology). Final conformational sampling within locations of confirmation borings CB-4 and CB-5 in the building area, as shown on the attached Exhibit A, will be required prior to





**EXHIBIT A**



AGRA Earth &  
Environmental, Inc.  
11335 NE 122nd Way  
Suite 100  
Kirkland, Washington  
U.S.A. 98034-6918  
Tel (206) 820-4669  
Fax (206) 821-3914

28 February 1997  
7-91M-11502

Norman Property Management  
1420 Fifth Avenue, Suite 3600  
Seattle, Washington 98101

Attention: Ms. Melody Westerdal

Subject: **Sea-Tac Plaza**  
Biannual Sampling of Monitoring Well MW-3  
Former Y-Pay-Mor Dry Cleaners  
Federal Way, Washington

Dear Ms. Westerdal:

AGRA Earth & Environmental, Inc. (AEE) is pleased to present the results of our biannual groundwater sampling event on the above-referenced property under our current contract. This phase of work was completed in general accordance with our *Memorandum of Understanding* dated 5 February 1997.

AEE had previously completed an *Independent Remediation Action Report* (IRAP) (dated 22 December 1994) for the former Y-Pay-Mor dry cleaner site. It is our understanding that Washington State Department of Ecology (DOE) has requested additional sampling of the groundwater in monitoring well MW-3. The well is to be sampled twice per year, once in the wet season and once in the dry season. **This letter presents the results of the first sampling event completed on 10 February 1997.**

Prior to sampling, approximately 12 gallons of groundwater was purged from the monitoring well (MW-3). The well was purged dry. The purge water was returned to AEE for disposal. Following purging, the well was allowed to recover, and then a groundwater sample was collected using a disposable bailer. The sample was sent to AEE's analytical lab in Portland, Oregon under AEE's chain-of-custody procedures and submitted for analysis for volatile organic compounds by EPA Method 8260. The laboratory certificates are attached to this letter.

The analytical results indicate that the only analyte present at concentrations above the method detection limits is cis-1,2-Dichloroethene (cis-DCE). The observed concentration of cis-DCE was 1.82 ppb, and is well below the MTCA Method B cleanup level of 80 ppb. This concentration

is slightly lower than the concentration detected on the 17 November 1994 sampling event (2.2 ppb). The historic water level and analytical data are presented in Table 1.

The results of this groundwater sampling event indicate that cis-DCE is currently the only volatile organic compound present at concentrations above the method detection limit of 1 ppb. The results also indicate that the concentration of cis-DCE appears to be continuing to decline. AEE is scheduled to sample this site again in July of 1997.

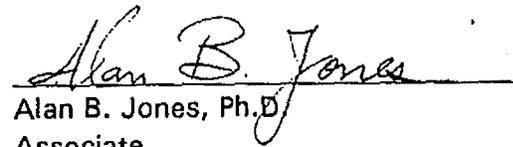
AEE appreciates the opportunity to be of continued service on this project. If you should have any questions or comments regarding this phase of work or any aspect of this project, please do not hesitate to call.

Respectfully submitted,

AGRA Earth & Environmental, Inc.



Eric L. Smith  
Staff Geologist

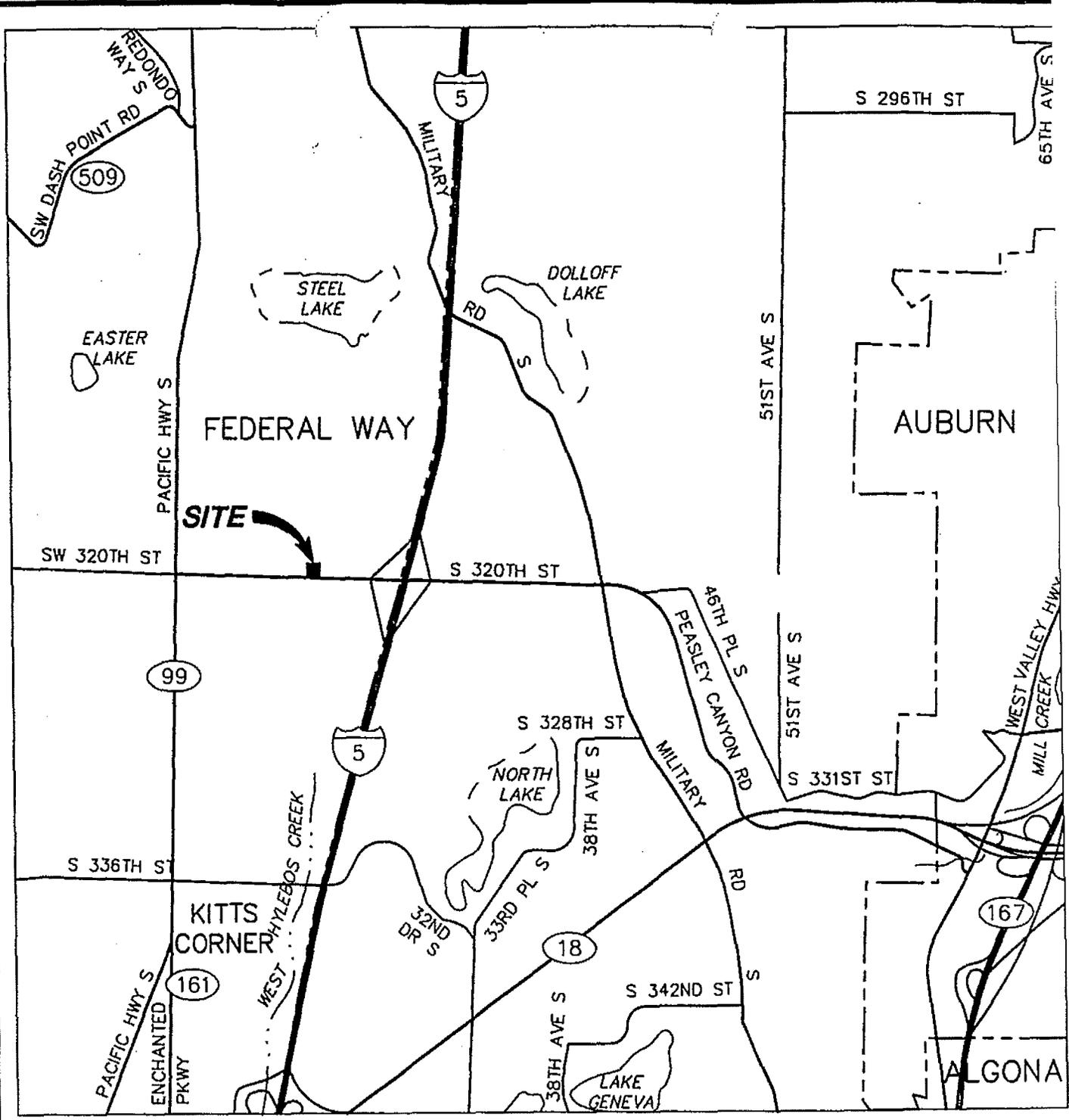


Alan B. Jones, Ph.D.  
Associate

ELS/ABJ/lad

Enclosures: Laboratory Analytical Test Certificates  
Figure 1 — Location Map  
Figure 2 — Site Map

AGRA EARTH & ENVIRONMENTAL, INC. DRAWING NO. 91\11502\LOCATION.DWG



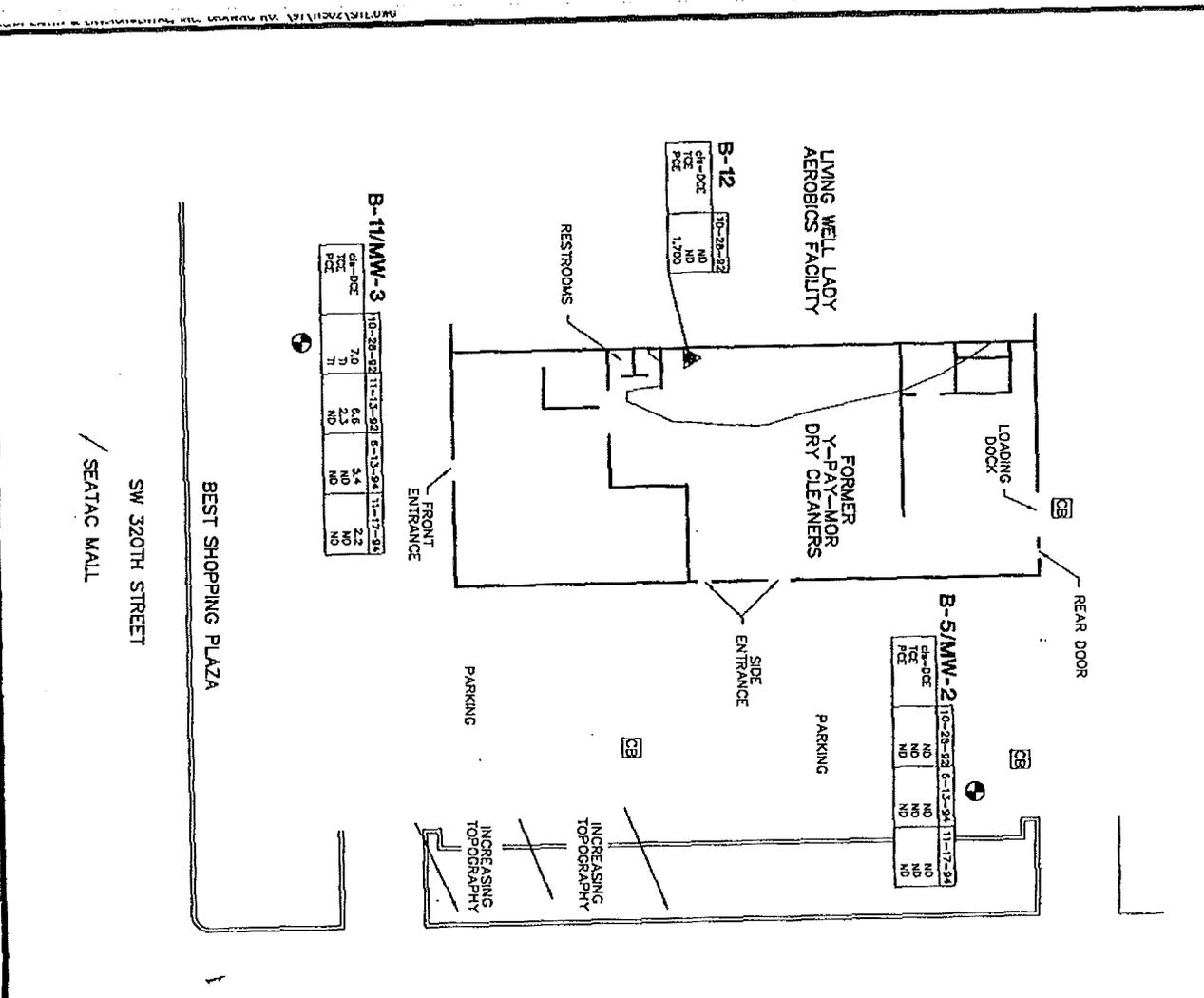
FIGURE

**AGRA**  
**Earth & Environmental**  
 11335 N.E. 122nd Way, Suite 100  
 Kirkland, WA, U.S.A. 98034-6918

W.O.	7-91M-11502-0
DESIGN	ELS
DRAWN	BDT
DATE	MAR 1997
SCALE	N.T.S.

**Y-PAY-MOR DRY CLEANERS**  
 2210 S.W. 320TH STREET  
 FEDERAL WAY, WASHINGTON

**LOCATION MAP**



**LEGEND**

- B-11/MW-3 2" ID MONITORING WELL NUMBER AND LOCATION
- B-12 SPECIAL CASSED BORING NUMBER AND LOCATION
- STORM DRAIN

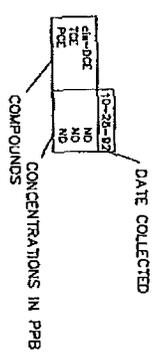
APPROXIMATE LIMIT OF CHARACTERIZATION WITHIN SUBJECT SITE BUILDING

**GROUNDWATER TEST RESULTS**

CONCENTRATIONS IN PARTS PER BILLION (PPB)  
 NOT DETECTED, BELOW METHOD DETECTION LIMIT  
 COMPOUND IDENTIFIED, BELOW LABORATORY DETECTION LIMIT

gls-DCE  
 TI  
 PCE

gls-1,2-DICHLOROETHENE  
 TRICHLOROETHENE  
 TETRACHLOROETHENE



**AGRA**  
 Earth & Environmental  
 11335 N.E. 122nd Way, Suite 100  
 Kirkland, WA, U.S.A. 98034-6918

W.O. DESIGN	7-91W-11502-0
DRAWN	EIS
DATE	01
SCALE	MAR 1997
	1" = 30'

Y-PAY-MOR DRY CLEANERS  
 2210 S.W. 320TH STREET  
 FEDERAL WAY, WASHINGTON  
 SITE PLAN

FIGURE 2



AGRA Earth & Environmental, Inc.  
7477 SW Tech Center Drive  
Portland, Oregon  
U.S.A. 97223-8025  
Tel (503) 639-3400  
Fax (503) 620-7892

February 19, 1997

AGRA Earth & Environmental  
11335 NE 122nd Way, Suite 100  
Kirkland, WA 98034

**Attention: Mr. Jeff Kaspar**

Dear Mr. Kaspar:

RE: Analytical Results For Project 7-91M-11502

Attached are the results for the sample submitted on February 12, 1997 from the above referenced project. For your reference, our project number associated with this sample is WA970084.

The sample was analyzed for volatile organic compounds at the AGRA Earth & Environmental Portland Chemistry Laboratory.

All analyses were conducted in accordance with applicable QA/QC guidelines. The results apply only to the sample submitted.

Please feel free to contact me if you have any questions regarding this report, or if I can be of any assistance in any other matter.

Respectfully submitted,

**AGRA Earth & Environmental**

A handwritten signature in black ink, appearing to read 'Sean Gormley', written over a horizontal line.

Sean Gormley  
Laboratory Manager

Project: Why Pay More  
 Project No.: 7-91M-11502  
 Project Manager: Jeff Kaspar  
 Sample Matrix: Water

Service Request No.: WA970084  
 Report Date: 2/17/97  
 Report No.: 97008401  
 C.O.C. No.: 02289

Volatile Organic Compounds by GC/MSD  
 EPA Methods 5030/8260A  
 ug/L(ppb)

Sample Name: Lab Code:	MW-3 0084-1	Lab Blank 0084-MB	Reporting Limit
Dichlorodifluoromethane	ND	ND	1.0
Chloromethane	ND	ND	1.0
Vinyl Chloride	ND	ND	1.0
Bromomethane	ND	ND	1.0
Chloroethane	ND	ND	1.0
Trichlorofluoromethane	ND	ND	1.0
1,1-Dichloroethene	ND	ND	1.0
Acetone	ND	ND	20
Carbon Disulfide	ND	ND	1.0
Methylene Chloride	ND	ND	1.0
trans-1,2-Dichloroethene	ND	ND	1.0
1,1-Dichloroethane	ND	ND	1.0
2,2-Dichloropropane	ND	ND	1.0
cis-1,2-Dichloroethene	1.82	ND	1.0
2-Butanone(MEK)	ND	ND	10
Bromochloromethane	ND	ND	1.0
Chloroform	ND	ND	1.0
1,1,1-Trichloroethane	ND	ND	1.0
Carbon Tetrachloride	ND	ND	1.0
1,1-Dichloropropene	ND	ND	1.0
Benzene	ND	ND	1.0
1,2-Dichloroethane	ND	ND	1.0
Trichloroethene	ND	ND	1.0
1,2-Dichloropropane	ND	ND	1.0
Dibromomethane	ND	ND	1.0
Bromodichloromethane	ND	ND	1.0
cis-1,3-Dichloropropene	ND	ND	1.0
4-Methyl-2-Pentanone(MIBK)	ND	ND	10
Toluene	ND	ND	1.0
trans-1,3-Dichloropropene	ND	ND	1.0
1,1,2-Trichloroethane	ND	ND	1.0
Tetrachloroethene	ND	ND	1.0
2-Hexanone	ND	ND	10
1,3-Dichloropropane	ND	ND	1.0
Dibromochloromethane	ND	ND	1.0
1,2-Dibromoethane	ND	ND	1.0
Chlorobenzene	ND	ND	1.0
1,1,1,2-Tetrachloroethane	ND	ND	1.0
Ethylbenzene	ND	ND	1.0
m,p-Xylene	ND	ND	1.0
o-Xylene	ND	ND	1.0
Styrene	ND	ND	1.0

ND Not Detected

Project: Why Pay More  
 Project No.: 7-91M-11502  
 Project Manager: Jeff Kaspar  
 Sample Matrix: Water

Service Request No.: WA970084  
 Report Date: 2/17/97  
 Report No.: 97008401  
 C.O.C. No.: 02289

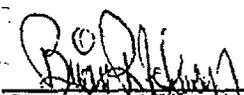
**Volatile Organic Compounds by GC/MSD**  
**EPA Methods 5030/8260A**  
 ug/L(ppb)

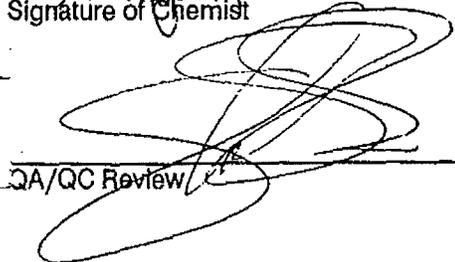
Sample Name: Lab Code:	MW-3 0084-1	Lab Blank 0084-MB	Reporting Limit
Bromoform	ND	ND	1.0
Isopropylbenzene	ND	ND	1.0
Bromobenzene	ND	ND	1.0
1,1,2,2-Tetrachloroethane	ND	ND	1.0
1,2,3-Trichloropropane	ND	ND	1.0
n-Propylbenzene	ND	ND	1.0
2-Chlorotoluene	ND	ND	1.0
4-Chlorotoluene	ND	ND	1.0
1,3,5-Trimethylbenzene	ND	ND	1.0
tert-Butylbenzene	ND	ND	1.0
1,2,4-Trimethylbenzene	ND	ND	1.0
sec-Butylbenzene	ND	ND	1.0
1,3-Dichlorobenzene	ND	ND	1.0
4-Isopropyltoluene	ND	ND	1.0
1,4-Dichlorobenzene	ND	ND	1.0
1,2-Dichlorobenzene	ND	ND	1.0
n-Butylbenzene	ND	ND	1.0
1,2-Dibromo-3-Chloropropane	ND	ND	1.0
1,2,4-Trichlorobenzene	ND	ND	1.0
Hexachlorobutadiene	ND	ND	1.0
Naphthalene	ND	ND	20
1,2,3-Trichlorobenzene	ND	ND	20

Sample Date: 2/10/97      2/17/97  
 Analysis Date: 2/17/97      2/17/97

Surrogate Recoveries:			EPA %Recovery Acceptance
Dibromofluoromethane:	101%	96.6%	90%-107%
Toluene-d8:	98.4%	96.0%	93%-105%
4-Bromofluorobenzene:	104%	104%	92%-121%

ND Not Detected

  
 \_\_\_\_\_  
 Signature of Chemist

  
 \_\_\_\_\_  
 QA/QC Review

AGRA Earth Environmental Portland Chemistry Laboratory  
Sample Receipt Documentation Form

Client: <u>Whey Pay More</u> SR No.: <u>WA 990084</u> Date: <u>2/12/97</u> Name: <u>Don</u>	Cooler Temperatures  <p align="center" style="font-size: 1.5em;">4.0°C</p>
Temperature Of Cooler Interior Upon Receipt (Record To The Right): Received By: <u>CDU</u>	

**Section 1: Shipping/Delivery Issues**

1. Method of Sample Delivery: <u>UPS Fed</u>			
2. Airbill or Courier Receipt Number: <u>1576 297 2860</u>			
3. Is a copy of the airbill or courier receipt available to be placed in the job file?	<input checked="" type="radio"/> Yes	<input type="radio"/> No	<input type="radio"/> NA

**Section 2: Sample Custody Issues**

4. Are custody seals on the shipping container intact?	<input type="radio"/> Yes	<input type="radio"/> No	<input checked="" type="radio"/> NA
5. Is a COC or other sample transmittal document present?	<input checked="" type="radio"/> Yes	<input type="radio"/> No	<input type="radio"/> NA
6. Is the COC complete?	<input checked="" type="radio"/> Yes	<input type="radio"/> No	<input type="radio"/> NA
7. Are sample seals intact?	<input type="radio"/> Yes	<input type="radio"/> No	<input checked="" type="radio"/> NA
8. Does the COC match the samples received?	<input checked="" type="radio"/> Yes	<input type="radio"/> No	<input type="radio"/> NA

**Section 3: Sample Integrity Issues**

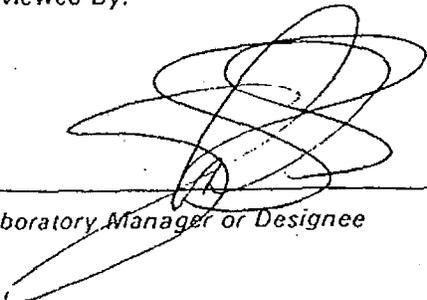
9. Are all sample containers intact and not leaking?	<input checked="" type="radio"/> Yes	<input type="radio"/> No	<input type="radio"/> NA
10. Are all samples preserved properly?	<input checked="" type="radio"/> Yes	<input type="radio"/> No	<input type="radio"/> NA
11. Are all samples within holding time for the required tests?	<input checked="" type="radio"/> Yes	<input type="radio"/> No	<input type="radio"/> NA
12. Were all samples received at the proper temperature?	<input checked="" type="radio"/> Yes	<input type="radio"/> No	<input type="radio"/> NA
13. Are samples for volatiles and other headspace sensitive parameters free of headspace or bubbles?	<input checked="" type="radio"/> Yes	<input type="radio"/> No	<input type="radio"/> NA

**Section 4: Sample Containers Received:**

14. 4 oz glass jars	
15. 8 oz glass jars	
16. 40 ml VOA vials <u>2</u>	
17. 1 liter glass	
18. Other (describe):	

**NOTE:** Any response of no above requires filing a nonconformance report with laboratory management.

Reviewed By:



Laboratory Manager or Designee



# Earth & Environmental

11335 NE 122nd Way, Suite 100  
Kirkland, Washington 98034-6918  
Tel (206) 820-4669 Fax (206) 821-3914

0228

## CHAIN OF CUSTODY

PROJECT <i>Why Pay More</i>		PROJECT No. <i>791M-11502</i>		ANALYSIS REQUESTED (circle, check box or write preferred method in box)																									
CLIENT <i>AGRA</i>		PHONE No. <i>(206) 200-4669</i>																											
PROJECT MANAGER <i>Jeff Keaton</i>		PHONE No. <i>(206) 820-4444</i>		<input type="checkbox"/> BTEX by EPA 602 / 8020	<input type="checkbox"/> WTPH-G	<input type="checkbox"/> BTEX / WTPH-G	<input type="checkbox"/> WTPH-HCID	<input type="checkbox"/> WTPH-D / WTPH-D EXTENDED	<input type="checkbox"/> TPH by EPA 8015 MODIFIED	<input type="checkbox"/> WTPH-418.1 MODIFIED	<input type="checkbox"/> TPH by EPA 418.1	<input type="checkbox"/> GC / MS EPA 624 / 8240 or EPA 8260 Volatiles	<input type="checkbox"/> GC / MS EPA 625 / 8270 Semi-volatiles	<input type="checkbox"/> VOCs EPA 601 / 8010 or EPA 602 / 8020	<input type="checkbox"/> PCBs EPA 608 / 8080	<input type="checkbox"/> LEAD EPA 6010 / EPA 7421 Total / Dissolved	<input type="checkbox"/> TOTAL METALS	<input type="checkbox"/> TCLP											
SAMPLER'S NAME (please print) <i>Eric Smith</i>		SAMPLER'S SIGNATURE <i>[Signature]</i>		<input type="checkbox"/> 8 HOUR	<input type="checkbox"/> 24 HOUR	<input type="checkbox"/> 1 WEEK	<input checked="" type="checkbox"/> 2 WEEK (standard)	<input type="checkbox"/> OTHER _____	SPECIAL INSTRUCTIONS / ADDITIONAL COMMENTS <i>2 VOA's preserved &amp; expressed          Please dispose of unneeded VOA's          Thanks</i>																				
SAMPLE I.D.	DATE	TIME	MATRIX	PRESERVATIVE	CONTAINERS No.	VOL.																							
<i>MW-3</i>	<i>2/16/07</i>	<i>3:00</i>	<i>W</i>	<i>Ch-11 HCL</i>	<i>1</i>	<i>WV</i>																							
2.																													
3.																													
4.																													
5.																													
6.																													
7.																													
8.																													
9.																													
10.																													

SAMPLE RECEIPT		LABORATORY <i>AGRA</i>		TURNAROUND TIME		SPECIAL INSTRUCTIONS / ADDITIONAL COMMENTS	
TOTAL # CONTAINERS		SHIPPING I.D. / AIRBILL # <i>7609 013848</i>		<input type="checkbox"/> 8 HOUR			
CONDITION OF CONTAINERS		CARRIER <i>UPS</i>		<input type="checkbox"/> 24 HOUR			
CONDITION OF SEALS		DOT DESIGNATION		<input type="checkbox"/> 1 WEEK			
RELINQUISHED BY / AFFILIATION		DATE		ACCEPTED BY / AFFILIATION		DATE	
<i>Gene Smith / AGRA</i>		<i>2/16/07</i>		<i>[Signature]</i>		<i>2/16/07</i>	
TIME <i>8:00</i>		TIME <i>8:00</i>		TIME		TIME	
PAGE		PAGE		PAGE		PAGE	
<i>1</i>		<i>1</i>		<i>1</i>		<i>1</i>	

LAW OFFICES

SHORT CRESSMAN & BURGESS P.L.L.C.

PAUL R. CRESSMAN, SR., P.S.  
JOHN O. BURGESS  
BRIAN L. COMSTOCK  
ROBERT E. HEATON  
JOHN H. STRASBURGER  
JAMES A. OLIVER  
DAVID R. KOOPMANS  
KENNETH L. MYER  
ROBERT J. SHAW  
PAUL R. CRESSMAN, JR.  
ANDREW W. MARON  
CHRISTOPHER J. SOELLING  
PAUL J. DAYTON  
BRYAN P. COLUCCIO  
ROBERT E. HIBBS  
CHRISTOPHER R. OSBORN  
MICHAEL R. GARNER  
DAVID E. BRESKIN  
SCOTT A. SMITH  
THOMAS W. READ  
STEPHEN P. CONNOR  
SUSAN THORBROGGER  
SCOTT M. MISSALL  
LISA WOLFARD

999 THIRD AVENUE, SUITE 3000  
SEATTLE, WASHINGTON 98104-4088  
FAX: (206) 340-8856  
(206) 682-3333

KERRY S. BUCKLIN\*  
ANN T. WILSON  
WILLIAM A. BURGE  
KAREN A. GRUEN  
CLAUDIA L. CRAWFORD  
WALTER H. OLSEN, JR.  
ALISON WACHTERMAN  
JOHN D. SULLIVAN  
PAUL CHUEY  
CONNIE SUE MANOS MARTIN  
GRAEHM C. WALLACE  
JENNIFER DIKE  
CHRIS FARIAS  
\* MEMBER OF PATENT BAR,  
USPTO

RECEIVED

October 6, 1997

OCT 07 1997

DEPT. OF ECOLOGY

KENNETH P. SHORT  
DOUGLAS R. HARTWICZ  
SAMUEL S. CHUNG  
OF COUNSEL

JOSEF DIAMOND  
COUNSEL TO THE FIRM

Ms. Elaine P. Atkinson  
Environmental Scientist  
Toxics Cleanup  
Department of Ecology  
3190 - 106th S.E.  
Bellevue, WA 98008-5452

Re: *Sea-Tac Plaza; Former Y Pay Mor Dry Cleaner, Federal Way, Washington; DOE  
No. N-17-5295-000*

Dear Ms. Atkinson:

Enclosed for your review is a copy of AGRA's August 20, 1997 report that sets forth the results from the July groundwater sampling event at the former Y Pay Mor Dry Cleaner in Federal Way. We have previously forwarded the February sampling results to you.

As you can see, the results show that the concentration of cis-DCE remains an order of magnitude below the MTCA Method B cleanup level. Both AGRA and SeaTac Plaza believe that these results should satisfy the Department's monitoring requirement. I will contact you shortly so that we may discuss finalizing the Declaration of Restrictive Covenants and issuance of a final no further action letter.

In the meantime, please feel free to call if you have any questions.

Sincerely,

  
Alison Wachterman

AW:jmb

Enclosure  
cc: Lita Johnson



**AGRA Earth & Environmental**  
ENGINEERING GLOBAL SOLUTIONS

**AGRA Earth &  
Environmental, Inc.**  
11335 NE 122nd Way  
Suite 100  
Kirkland, Washington  
USA 98034-6918  
Tel (206) 820-4669  
Fax (206) 821-3914

20 August 1997  
7-91M-115020

The Norman Company  
1420 Fifth Avenue, Suite 3600  
Seattle, Washington 98101

Attention: Ms. Lita F. Johnson, R.P.A.

Subject: **Sea-Tac Plaza**  
Biannual Sampling of Monitoring Well MW-3  
Former Y-Pay-Mor Dry Cleaners  
Federal Way, Washington

RECEIVED  
AUG 25 1997  
SHORT, GRESSMAN & BURGESS

Dear Ms. Johnson:

AGRA Earth & Environmental, Inc. (AEE) is pleased to present the results of our biannual groundwater sampling event on the above-referenced property under our current contract. This phase of work was completed in general accordance with our *Memorandum of Understanding* to Melody Westerdal of The Norman Company dated 5 February 1997.

AEE had previously completed an *Independent Remediation Action Report* (IRAP, dated 22 December 1994) for the former Y-Pay-Mor dry cleaner site. It is our understanding that the Washington State Department of Ecology (Ecology) requested additional sampling of the groundwater in monitoring well MW-3 to monitor the presence of cis-DCE. The well was to be sampled twice per year, once in the wet season and once in the dry season. This letter presents the results of the second sampling event completed on 23 July 1997.

Prior to sampling, approximately 3 gallons of groundwater was purged from the monitoring well (MW-3). The well was purged dry. The purge water was returned to AEE for disposal following results of the analytical testing. Following purging, the well was allowed to recover and then a groundwater sample was collected from the bottom of the well using a disposable bailer. The sample was sent to AEE's analytical lab in Portland, Oregon under AEE's chain-of-custody procedures and submitted for analysis for volatile organic halocarbons by EPA Methods 5030/8260A. The laboratory certificates are attached to this letter.

The analytical results indicate that the only analyte present at concentrations above the method detection limit is cis-1,2-dichloroethene (cis-DCE). The observed concentration of

cis-DCE was 3.63 ppb and is well below the MTCA Method B cleanup level of 80 ppb. This concentration is slightly higher than the concentrations detected on the 10 February 1997 sampling event (1.82 ppb) and the 17 November 1994 sampling event (2.2 ppb). The historic water level and analytical data are presented in Table 1. The observed increase is most likely due to a seasonal change in the amount of dilution created by wet winter conditions versus drier summer conditions and a lower water table.

The results of this groundwater sampling event indicate that cis-DCE is currently the only volatile organic compound present at concentrations above the method detection limit of 1 ppb. The results also indicate that the concentration of cis-DCE appears to be fairly stable with some seasonal fluctuation. AEE is not currently scheduled to sample this site again.

AEE recommends that you forward copies of both this report and the one generated on 28 February 1997 to the Ecology project manager for the IRAP project, Ms. Elaine Atkinson. Ecology stipulated in a meeting attended by AEE representatives, Ms. Melody Westerdal of Norman Property Management, and Ms. Atkinson of Ecology on 30 May 1995 that monitoring well MW-3 be sampled and analyzed biannually for 3 years for volatile organic halocarbons, beginning that summer. Although this monitoring was only performed for the year 1997, it is likely that, because the concentration of cis-DCE remains an order of magnitude below the MTCA Method B cleanup level, Ecology will no longer require that The Norman Company continue the sampling program. Alternatively, AEE will contact the Ecology project manager, submit copies of these two reports, and negotiate a resolution on The Norman Company's behalf if you so request. The Ecology identification number for this site, N-17-5295-000, should be used in all correspondence with Ecology regarding this site.

The Norman Company  
20 August 1997

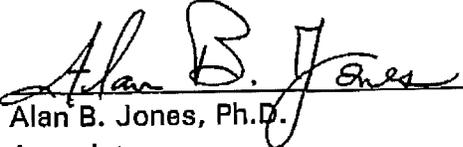
7-91M-115020  
Page 3

AEE appreciates the opportunity to be of continued service on this project. If you should have any questions or comments regarding this phase of work or any aspect of this project, please do not hesitate to call.

Respectfully submitted,

AGRA Earth & Environmental, Inc.

  
\_\_\_\_\_  
Kimberly D. Hazard  
Environmental Technician

  
\_\_\_\_\_  
Alan B. Jones, Ph.D.  
Associate

KDH/ABJ/lad

Enclosures: Table 1 - Summary of Analytical Test Results  
Laboratory Analytical Test Certificates  
Figure 1 - Location Map  
Figure 2 - Site Plan

AGRA EARTH & ENVIRONMENTAL, INC. DRAWING NO. \91\11502\LOCATION.DWG

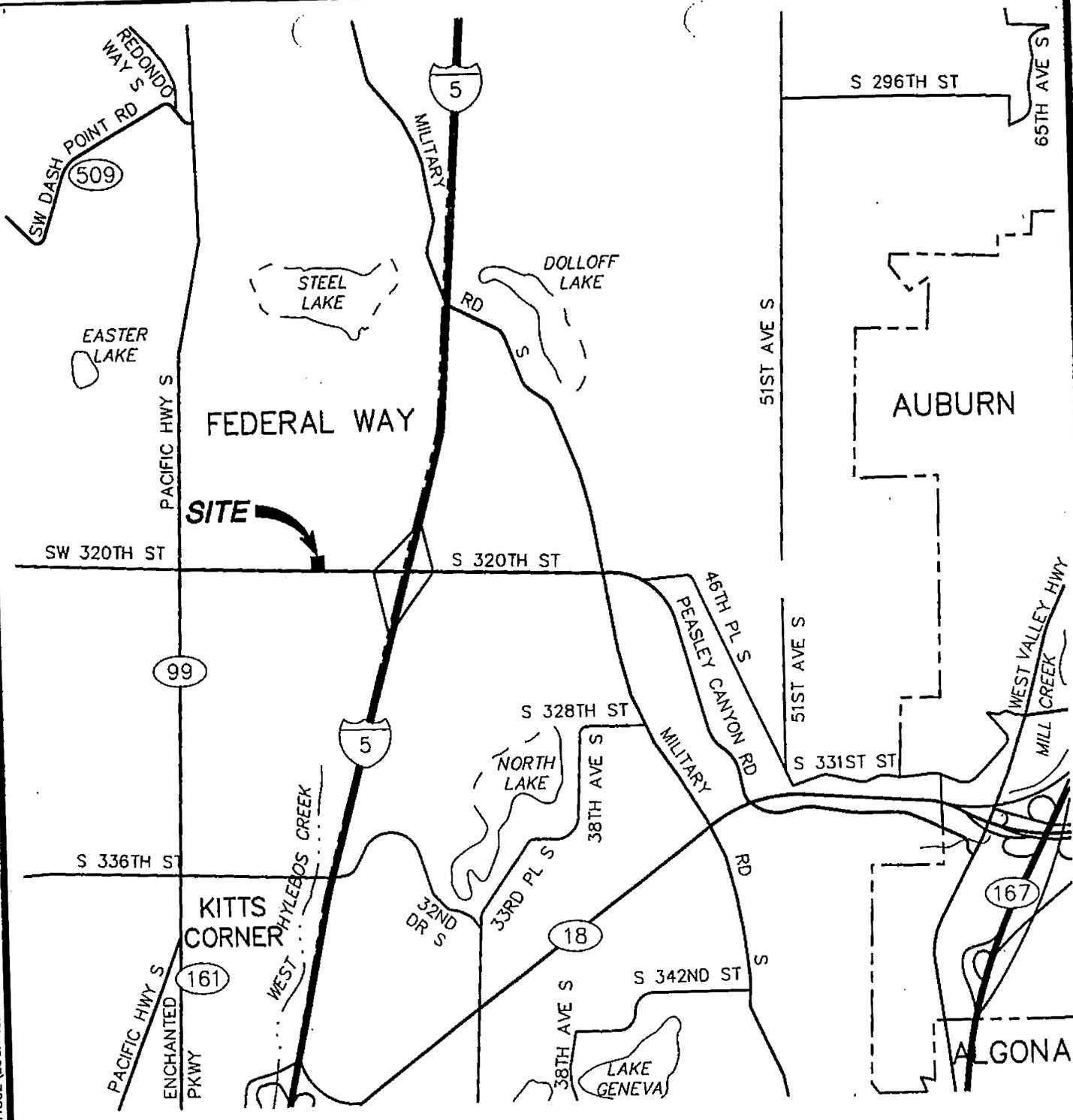


FIGURE 1

**AGRA**  
**Earth & Environmental**  
 11335 N.E. 122nd Way, Suite 100  
 Kirkland, WA, U.S.A. 98034-6918

W.O.	7-91M-11502-0
DESIGN	ABJ
DRAWN	JMR
DATE	AUG 1997
SCALE	N.T.S.

SEATAC PLAZA  
 2210 S.W. 320TH STREET  
 FEDERAL WAY, WASHINGTON

LOCATION MAP

**Table 1: Summary of Analytical Test Results: Groundwater (MW-3)  
 SeaTac Plaza (Former Y-Pay-Mor Dry Cleaners)  
 2210 SW 320th Street  
 Federal Way, Washington  
 AGRA Earth & Environmental, Inc. Project No. 7-91M-11502-0**

Sample ID	Date Collected	Depth to Water * (feet)	cis-DCE (ppb)	TCE (ppb)	PCE (ppb)
MW-3	28-Oct-92	8.56	7	TI	TI
	13-Nov-92	8.15	6.6	2.3	ND
	13-Jun-94	8.12	5.4	ND	ND
	17-Nov-94	8.63	2.2	ND	ND
	10-Feb-97	NR	1.82	ND	ND
	23-Jul-97	8.20	3.63	ND	ND
MTC A Method "A" Cleanup Level			NA	5	5
MTC A Method "B" Cleanup Level			80	NA	NA

**Notes:**

cis-DCE = cis-1,2-Dichloroethene

TCE = Trichloroethene

PCE = Tetrachloroethene

MTC A = Washington State, Model Toxics Control Act.

NR = Depth to water was not recorded on this date.

ND = Compound was analyzed, but was below laboratory detection limits.

TI = Compound identified, is estimated below laboratory detection limit.

\* = Measured from the top of monitoring well casing.

(J) = Estimated value.

All analytes are covered under EPA Method 8240 (Dec. 1992 through Nov. 1994) and EPA Method 8260A (Feb. 1997 through July 1997) for volatile organics. These methods cover a broad scan of analytes. Compounds above are the only analytes in the broad scan that were measured above the laboratory detection limits. Analytes not shown, but covered under Methods 8240 and 8260A were below the laboratory detection limits for all samples.

July 30, 1997

AGRA Earth & Environmental  
11335 NE 122nd Way, Suite 100  
Kirkland, WA 98034

**Attention: Dr. Alan Jones**

Dear Dr. Jones:

RE: Analytical Results For Project 7-91M-11502

Attached are the results for the sample submitted on July 24, 1997 from the above referenced project. For your reference, our project number associated with this sample is WA970497.

The sample was analyzed for volatile organic halocarbons at the AGRA Earth & Environmental Portland Chemistry Laboratory.

All analyses were conducted in accordance with applicable QA/QC guidelines. The results apply only to the sample submitted.

Please feel free to contact me if you have any questions regarding this report, or if I can be of any assistance in any other matter.

Respectfully submitted,

**AGRA Earth & Environmental**



Sean Gormley  
Laboratory Manager

Project: Y-Pay-MOR  
 Project No.: 7-91M-11502  
 Project Manager: Alan Jones  
 Sample Matrix: Water

Service Request No.: WA970497  
 Report Date: 7/29/97  
 Report No.: 97049701  
 C.O.C. No.: 02659

**Volatile Organic Halocarbons**  
**EPA Methods 5030/8260A**  
 ug/L(ppb)

Sample Name: Lab Code:	MW-3 0497-1	Lab Blank 0497-MB	Method Reporting Limit
Chloromethane	ND	ND	1.0
Vinyl Chloride	ND	ND	1.0
Bromomethane	ND	ND	1.0
Chloroethane	ND	ND	1.0
Trichlorofluoromethane	ND	ND	1.0
1,1-Dichloroethene	ND	ND	1.0
Methylene Chloride	ND	ND	1.0
T-1,2-Dichloroethene	ND	ND	1.0
1,1-Dichloroethane	ND	ND	1.0
C-1,2-Dichloroethene	3.63	ND	1.0
Chloroform	ND	ND	1.0
1,1,1-Trichloroethane (TCA)	ND	ND	1.0
Carbon Tetrachloride	ND	ND	1.0
1,2-Dichloroethane (EDC)	ND	ND	1.0
Trichloroethene (TCE)	ND	ND	1.0
1,2-Dichloropropane	ND	ND	1.0
Bromodichloromethane	ND	ND	1.0
2-Chloroethylvinyl ether	ND	ND	1.0
T-1,3-Dichloropropene	ND	ND	1.0
C-1,3-Dichloropropene	ND	ND	1.0
1,1,2-Trichloroethane	ND	ND	1.0
Tetrachloroethene (PCE)	ND	ND	1.0
Dibromochloromethane	ND	ND	1.0
1,2-Dibromoethane (EDB)	ND	ND	1.0
Chlorobenzene	ND	ND	1.0
Bromoform	ND	ND	1.0
1,1,2,2-Tetrachloroethane	ND	ND	1.0
1,3-Dichlorobenzene	ND	ND	1.0
1,4-Dichlorobenzene	ND	ND	1.0
1,2-Dichlorobenzene	ND	ND	1.0

Sample Date: 7/23/97 7/29/97  
 Analysis Date: 7/29/97 7/29/97

ND Not Detected

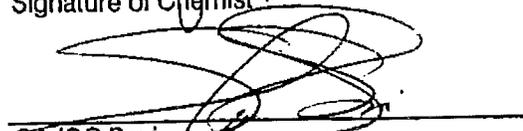


**ANALYSIS**  
EPA Methods 5030/8260A

**Surrogate Recoveries:**

	Sample Name:	MW-3	Lab Blank	
	Lab Code:	0497-1	0497-MB	Control
	Date Analyzed:	7/29/97	7/29/97	Limits
Dibromofluoromethane:		99%	99%	90%-107%
Toluene-d <sub>8</sub> :		100%	99%	93%-105%
4-Bromofluorobenzene:		103%	108%	92%-121%

  
\_\_\_\_\_  
Signature of Chemist

  
\_\_\_\_\_  
QA/QC Review



Project: Y-Pay-MOR  
 Project No.: 7-91M-11502  
 Project Manager: Alan Jones  
 Sample Matrix: Water

Service Request No.: WA970497  
 Report Date: 7/29/97  
 Report No.: 97049702  
 C.O.C.: 02659

**QC Data Report  
 MS/MSD Summary  
 Volatile Organic Compounds by GC/MSD  
 EPA Methods 5030/8260A  
 ug/L(ppb)**

Sample Name:	MW-3	Spike Level	Matrix Spike	Percent Recovery (MS)	Matrix Spike Duplicate	Percent Recovery (DMS)	AEE % Recovery Acceptance Criteria	Relative Percent Difference (RPD)
Lab Code:	0497-1	(ug/L)	Spike	(MS)	Duplicate	(DMS)		
1,1 - Dichloroethene	<1.0	50.0	54.0	108	52.5	105	75% - 129%	3
Benzene	<1.0	50.0	54.4	109	53.8	108	91% - 115%	1
Trichloroethene	<1.0	50.0	51.5	103	51.0	102	86% - 110%	<1
Toluene	<1.0	50.0	53.3	107	53.2	106	86% - 116%	<1
Chlorobenzene	<1.0	50.0	54.2	108	53.3	107	92% - 113%	2
Sample Date:	7/23/97	~	7/23/97	~	7/23/97	~	~	
Analysis Date:	7/29/97	~	7/29/97	~	7/29/97	~	~	
							<b>AEE</b>	
							<b>Acceptance</b>	
							<b>Limits</b>	
Surrogate Recovery:								
Dibromofluoromethane:	99%	~	100%	~	99%	~	90%-107%	
Toluene-dg:	100%	~	100%	~	100%	~	93%-105%	
4-Bromofluorobenzene:	103%	~	107%	~	103%	~	92%-121%	

ND Not Detected

  
 \_\_\_\_\_  
 Signature of Chemist

  
 \_\_\_\_\_  
 QA/QC Review

**AGRA Earth & Environmental Portland Chemistry Laboratory  
Sample Receipt Documentation Form**

Project: Y-Pay-MOR	Cooler Temperatures  7.2
SR No.: WA970497	
Date: 7/24/97	
Time: 9:40	
Temperature of Cooler Upon Receipt (Record to the Right):	
Received By: 	

**Section One: Shipping/Delivery Issues**

1. Method of Sample Delivery: UPS			
2. Airbill or Courier Receipt Number: 76098013848			
3. Is a copy of the airbill or courier receipt available to be placed in the job file?	<input checked="" type="radio"/> Yes	<input type="radio"/> No	<input type="radio"/> NA

**Section Two: Sample Custody Issues**

4. Are custody seals on the shipping container intact?	<input checked="" type="radio"/> Yes	<input type="radio"/> No	<input type="radio"/> NA
5. Is a COC or other sample transmittal document present?	<input checked="" type="radio"/> Yes	<input type="radio"/> No	<input type="radio"/> NA
6. Is the COC complete?	<input checked="" type="radio"/> Yes	<input type="radio"/> No	<input type="radio"/> NA
7. Are the sample seals intact?	<input checked="" type="radio"/> Yes	<input type="radio"/> No	<input type="radio"/> NA
8. Does the COC match the samples received?	<input checked="" type="radio"/> Yes	<input type="radio"/> No	<input type="radio"/> NA

**Section Three: Sample Integrity Issues**

9. Are all sample containers intact and not leaking?	<input checked="" type="radio"/> Yes	<input type="radio"/> No	<input type="radio"/> NA
10. Are all samples preserved properly?	<input checked="" type="radio"/> Yes	<input type="radio"/> No	<input type="radio"/> NA
11. Are all samples within holding time for the required tests?	<input checked="" type="radio"/> Yes	<input type="radio"/> No	<input type="radio"/> NA
12. Were all samples received at the proper temperature?	<input checked="" type="radio"/> Yes	<input type="radio"/> No	<input type="radio"/> NA
13. Are samples for volatiles and other headspace sensitive parameters free of headspace or bubbles?	<input checked="" type="radio"/> Yes	<input type="radio"/> No	<input type="radio"/> NA

**Section Four: Sample Containers Received:**

14. 4 oz. glass jars:	19. 2oz. amber (MeOH):
15. 8 oz. glass jars:	20. Encore samplers:
16. 40ml VOA vials: 3	21. 500ml plastic:
17. 1 liter glass:	22. 1 liter plastic:
18. Other (describe):	

Reviewed By:



Laboratory Manager or Designee





MW-3



2" ID MONITORING WELL N AND LOCATION



STORM DRAIN

APPROXIMATE LIMIT OF CONTAMINATION WITHIN SUBJECT SITE BUILT

### GROUNDWATER TEST

CONCENTRATIONS IN PARALLELS NOT DETECTED, BELOW MINIMUM DETECTABLE LIMIT. COMPOUND IDENTIFIED, BE

ND  
TI  
cis-DCE  
TCE  
PCE

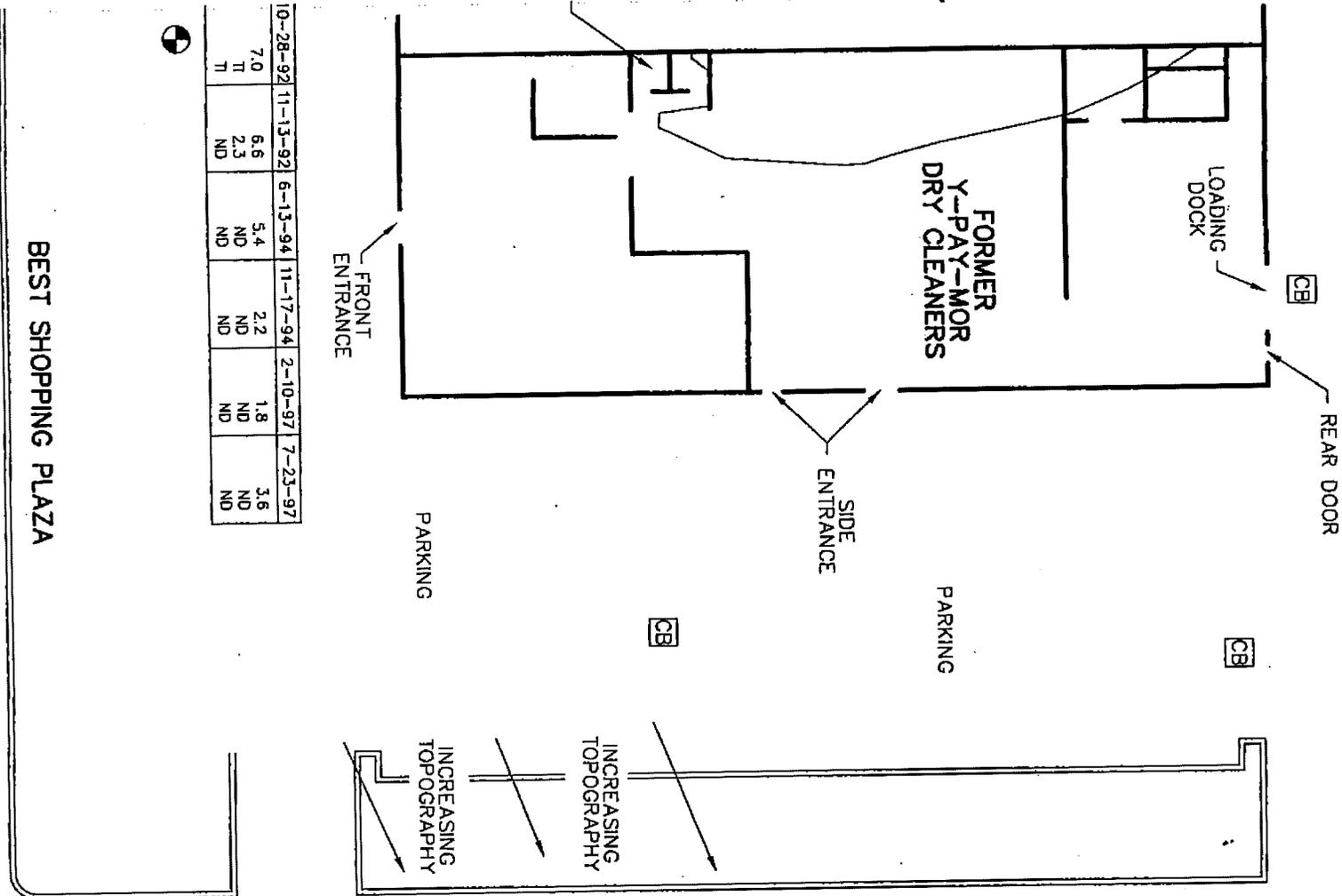
cis-1,2-DICHLOROETHENE  
TRICHLOROETHENE  
TETRACHLOROETHENE

cis-DCE	ND	10-28-92
TCE	ND	
PCE	ND	

COMPOUNDS

DATE

23RD AVENUE SOUTH

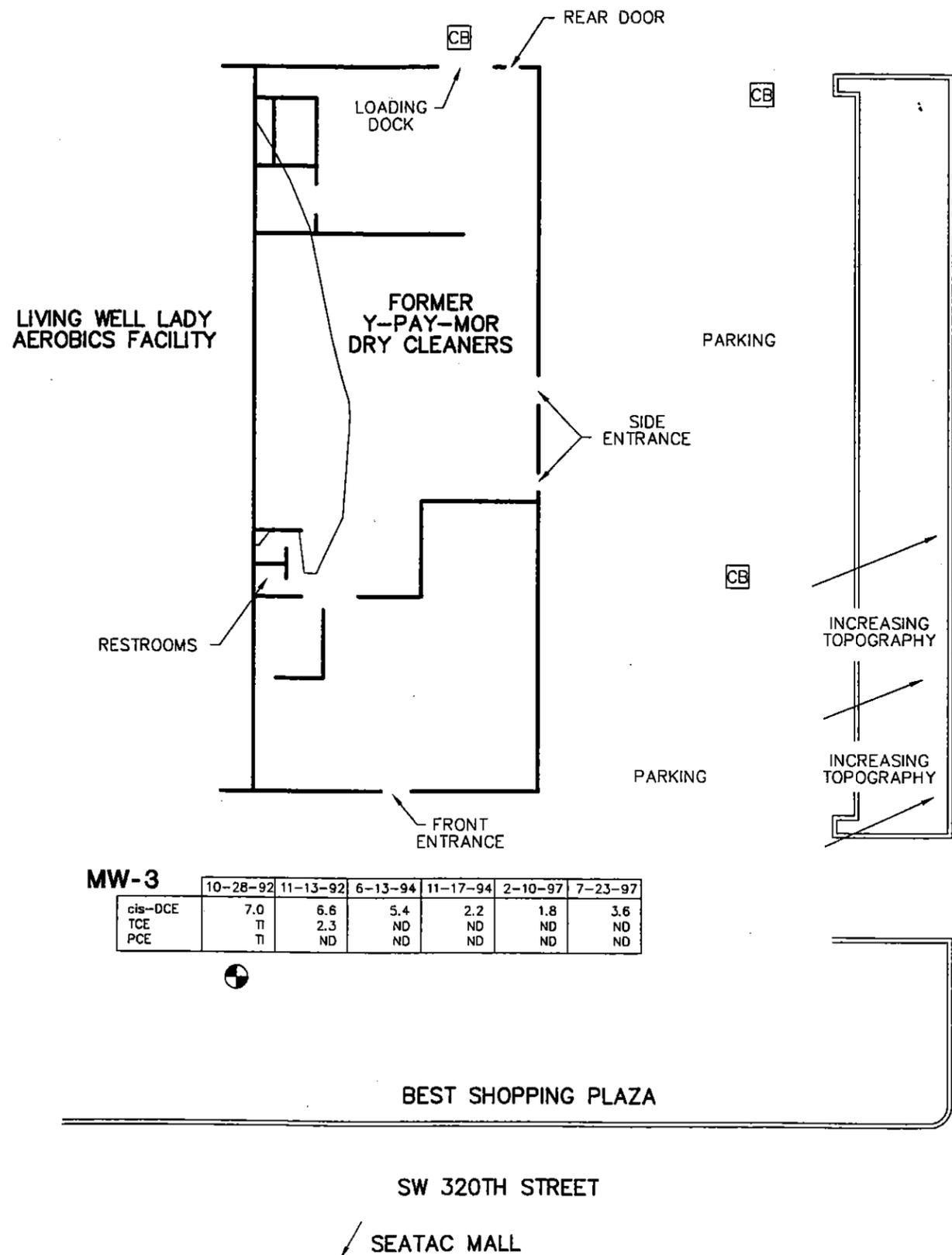


10-28-92	11-13-92	6-13-94	11-17-94	2-10-97	7-23-97
7.0	6.6	5.4	2.2	1.8	3.6
TI	ND	ND	ND	ND	ND

BEST SHOPPING PLAZA



AGRA EARTH & ENVIRONMENTAL, INC. DRAWING NO. \91\11502\SITE.DWG



**LEGEND**

**MW-3**  
 2" ID MONITORING WELL NUMBER AND LOCATION

STORM DRAIN

APPROXIMATE LIMIT OF CHARACTERIZATION WITHIN SUBJECT SITE BUILDING

**GROUNDWATER TEST RESULTS**

CONCENTRATIONS IN PARTS PER BILLION (PPB)  
 ND NOT DETECTED, BELOW METHOD DETECTION LIMIT  
 TI COMPOUND IDENTIFIED, BELOW LABORATORY DETECTION LIMIT

cis-DCE cis-1,2-DICHLOROETHENE  
 TCE TRICHLOROETHENE  
 PCE TETRACHLOROETHENE

		DATE COLLECTED
		10-28-92
cis-DCE	ND	CONCENTRATIONS IN PPB
TCE	ND	
PCE	ND	

COMPOUNDS

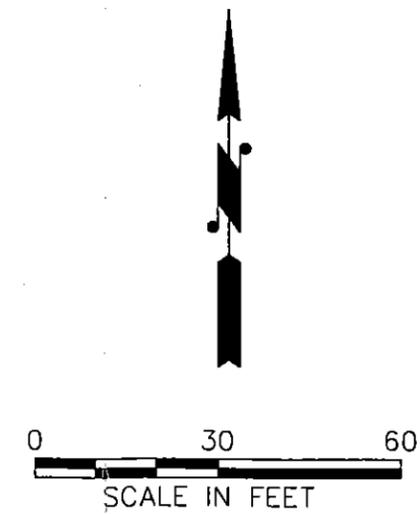


FIGURE 2

**AGRA**  
 Earth & Environmental  
 11335 N.E. 122nd Way, Suite 100  
 Kirkland, WA, U.S.A. 98034-6918

W.O. 7-91M-11502-0  
 DESIGN ABJ  
 DRAWN JMR  
 DATE AUG 1997

SEATAC PLAZA  
 2210 S.W. 320TH STREET  
 FEDERAL WAY, WASHINGTON

SITE PLAN

LAW OFFICES

SHORT CRESSMAN & BURGESS P.L.L.C.

999 THIRD AVENUE, SUITE 3000  
SEATTLE, WASHINGTON 98104-4088  
FAX: (206) 340-8856  
(206) 682-3333

February 27, 1998

PAUL R. CRESSMAN, SR., P.S.  
JOHN O. BURGESS  
BRIAN L. COMSTOCK  
ROBERT E. HEATON  
JOHN H. STRASBURGER  
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\* MEMBER OF PATENT BAR,  
USPTO

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KENNETH P. SHORT  
DOUGLAS R. HARTWICH  
SAMUEL S. CHUNG  
OF COUNSEL

JOSEF DIAMOND  
COUNSEL TO THE FIRM

Dan Cargill  
Department of Ecology  
3190 - 106th S.E.  
Bellevue, WA 98008

Re: *SeaTac Plaza; Former Y-Pay-Mor Dry Cleaners  
Draft Restrictive Covenant*

Dear Dan:

I have enclosed for your review a draft Restrictive Covenant for the SeaTac Plaza Corporation's former Y-Pay-Mor site. I have put the document into the new format you provided to me. As you will see, the only information I have not put in is the list of documents in Ecology's file regarding the site. Hopefully, you will be able to provide us with that information to input into the document.

Please let me know if this document is acceptable to Ecology so that we may move forward. Thank you and please call if you have any questions.

Sincerely,

SHORT CRESSMAN & BURGESS P.L.L.C.



Alison Wachterman

AW:jmb

cc: Ms. Lita Johnson

Short Cressman & Burgess P.L.L.C.  
 Attn: Alison Wachterman  
 3000 First Interstate Center  
 999 Third Avenue  
 Seattle, WA 98104-4008

<b>Document Title</b>	Restrictive Covenant
<b>Reference Number(s) of Related Documents</b>	
<b>Grantor</b>	SeaTac Plaza Corporation (the "Property Owner")
<b>Grantee</b>	
<b>Legal Description</b>	That Property commonly known as Space A-6, 2210 S. 320th Street, Federal Way, Washington, located within Lot 2 as delineated on King County short Plat No. 1079107, recorded under King County Recording No. 7912260667, being a portion of Tract A, Evergreen Plaza, a Planned Unit Development, according to the plat thereof recorded in Volume 100 of Plats, pages 74 and 75, in King County, Washington.
<b>Assessor's Property Tax Parcel Account Number(s)</b>	

**RESTRICTIVE COVENANT**

**DRAFT**

**SEATAC PLAZA CORPORATION**

2210 S. 320th Street, Space A-6; Former Y-Pay -Mor Dry Cleaners

This Declaration of Restrictive Covenant is made pursuant to RCW 70.105D.030(1)(f) and (g) and WAC 173-340-440 by SEATAC PLAZA CORPORATION, its successors and assigns, and the State of Washington Department of Ecology, its successors and assigns (hereafter "Ecology").

An independent remedial action (hereafter "Remedial Action") occurred at the property that is the subject of this Restrictive Covenant. The Remedial Action conducted at the property is described in the following document[s]:

These documents are on file at Ecology's Northwest Regional Office.

This restrictive Covenant is required because the Remedial Action resulted in residual concentrations of two contaminants which exceed the Model Toxics Control Act (MTCA) cleanup levels in the soil in two specific locations located under the building foundation.

The undersigned, SEATAC PLAZA CORPORATION, is the fee owner of real property (hereafter "Property") in the County of King, State of Washington, that is subject of this Restrictive Covenant. The Property is legally described as follows:

That property commonly known as Space A-6, 2210 S. 320th Street, Federal Way, Washington, located within Lot 2 as delineated on King County short Plat No. 1079107, recorded under King County Recording No. 7912260667, being a portion of Tract A, Evergreen Plaza, a Planned Unit Development, according to the plat thereof recorded in Volume 100 of Plats, pages 74 and 75, in King County, Washington.

SEATAC PLAZA CORPORATION makes the following declaration as to limitations, restrictions, and uses to which the Property may be put and specifies that such declarations shall constitute covenants to run with the land, as provided by law and shall be binding on all parties and all persons claiming under them, including all current and future owners of any portion of or interest in the Property (hereafter "Owner").

**Section 1.** A portion of the Property contains soil contaminated with cis-1,2-dichloroethene and tetrachloroethane, located under the building foundation at confirmation borings CB-4 and CB-5 as shown on Exhibit A. The Owner shall not alter, modify, or remove the existing structure(s) in any manner that may result in the release or exposure to the environment of that contaminated soil or create a new exposure pathway without prior written approval from Ecology.

**Section 2.** Any activity on the Property that may interfere with the integrity of the Remedial Action and continued protection of human health and the environment is prohibited.

**DRAFT**

**Section 3.** Any activity on the Property that may result in the release or exposure to the environment of a hazardous substance that remains on the Property as part of the Remedial Action, or create a new exposure pathway, is prohibited without prior written approval from Ecology.

**Section 4.** The Owner of the Property must give thirty (30) day advance written notice to Ecology of the Owner's intent to convey any interest in the Property. No conveyance of title, easement, lease, or other interest in the Property shall be consummated by the Owner without adequate and complete provision for continued monitoring, operation, and maintenance of the Remedial Action.

**Section 5.** The Owner must restrict leases to uses and activities consistent with the Restrictive Covenant and notify all lessees of the restrictions on the use of the Property.

**Section 6.** The Owner must notify and obtain approval from Ecology prior to any use of the Property that is inconsistent with the terms of this Restrictive Covenant. Ecology may approve any inconsistent use only after public notice and comment.

**Section 7.** The Owner shall allow authorized representatives of Ecology the right to enter the Property at reasonable times for the purpose of evaluating the Remedial Action; to take samples, to inspect Remedial Actions conducted at the Property, and to inspect records that are related to the Remedial Action.

**Section 8.** The Owner of the Property reserves the right under WAC 173-340-440 to record an instrument that provides that this Restrictive Covenant shall no longer limit use of the Property or be of any further force or effect. However, such an instrument may be recorded only if Ecology, after public notice and opportunity for comment, concurs. Final conformational sampling within locations of confirmation borings CB-4 and CB-5 in the building area, as shown on the attached Exhibit A, will be required prior to execution and recording of an instrument providing that this Restrictive Covenant shall have no further force and effect. Ecology shall not unreasonably withhold its consent if such final conformational sampling is presented by the Owner.

DATED this \_\_\_\_ day of \_\_\_\_\_, 1998.

SEATAC PLAZA CORPORATION

By \_\_\_\_\_

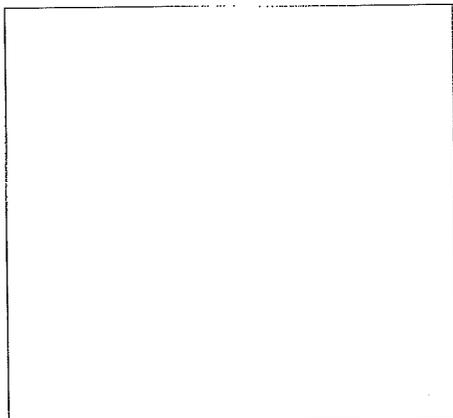
**DRAFT**

Its \_\_\_\_\_

STATE OF WASHINGTON        )  
  ) ss:  
COUNTY OF KING            )

I certify that I know or have satisfactory evidence that \_\_\_\_\_ is the person who appeared before me, and said person acknowledged that he signed this instrument, on oath stated that he was authorized to execute this instrument and acknowledged it as the \_\_\_\_\_ of SeaTac Plaza Corporation, a corporation, to be the free and voluntary act of such party for the uses and purposes mentioned in this instrument.

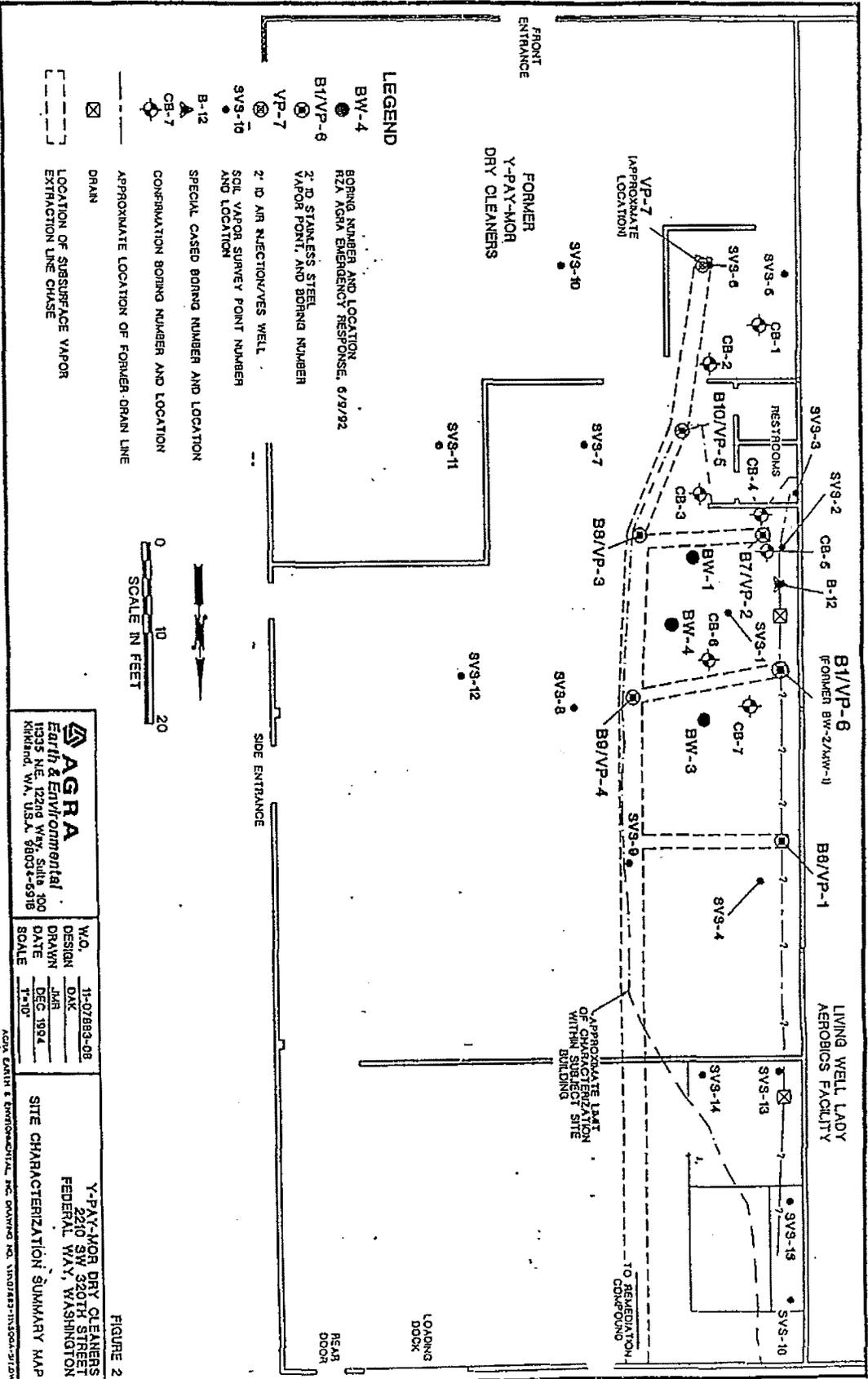
DATED: \_\_\_\_\_, 1998.



(Use this space for notarial stamp/seal)

\_\_\_\_\_  
Print Name: \_\_\_\_\_  
NOTARY PUBLIC in and for the State of  
Washington, residing at \_\_\_\_\_  
My Appointment expires: \_\_\_\_\_

# EXHIBIT A





STATE OF WASHINGTON  
DEPARTMENT OF ECOLOGY

Northwest Regional Office, 3190 - 160th Ave S.E. • Bellevue, Washington 98008-5452 • (425) 649-7000

March 6, 1998

Alison Wachterman  
Short Cressman & Burgess P.L.L.C  
999 Third Avenue, Suite 3000  
Seattle, WA 98104-4088

Dear Ms. Wachterman:

Re: SeaTac Plaza; Y-Pay-Mor Dry Cleaners  
Draft Restrictive Covenant

I have forwarded the draft Restrictive Covenant I received on March 2, 1998, to Maia Bellon of the Attorney General's office for her comment on Section 8. Other than my question about the wording on Section 8, the draft appears acceptable.

The documents that Ecology reviewed are as follows:

Preliminary Remedial Investigation, by AGRA Earth and Environmental (formerly RZA AGRA), dated November 1992,

Remediation System Installation, by AGRA Earth and Environmental (formerly RZA AGRA), dated October 1993,

Soil Vapor Extraction Remediation System, Performance Monitoring Record, by /AGRA Earth and Environmental (formerly RZA AGRA), dated February 7, 1994,

Independent Remedial Action Report, by AGRA Earth and Environmental (formerly RZA AGRA), dated December 22, 1994

The issue of monitoring will be addressed in the final NFA letter.



Alison Wachterman

March 6, 1998

Page 2

If you have any questions regarding this letter or the Restrictive Covenant, please don't hesitate to call me at 425-649-7023.

Sincerely,

A handwritten signature in black ink, appearing to read "DC", followed by a horizontal line extending to the right.

Daniel R. Cargill

DC:dc

LAW OFFICES  
SHORT CRESSMAN & BURGESS P.L.L.C.

**COPY**

PAUL R. CRESSMAN, SR., P.S.  
JOHN O. BURGESS  
BRIAN L. COMSTOCK  
ROBERT E. HEATON  
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KERRY S. BUCKLIN\*

\* MEMBER OF PATENT BAR,  
USPTO

999 THIRD AVENUE, SUITE 3000  
SEATTLE, WASHINGTON 98104-4088  
FAX: (206) 340-8856  
(206) 682-3333

April 7, 1998

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AUG 25 1998  
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ANN T. WILSON  
WILLIAM A. BURGE  
CLAUDIA CRAWFORD  
WALTER H. OLSEN, JR.  
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SAMUEL S. CHUNG  
OF COUNSEL

JOSEF DIAMOND  
COUNSEL TO THE FIRM

Mr. Dan Cargill  
Department of Ecology  
3190 - 106th S.E.  
Bellevue, WA 98008-5452

Re: *Y-Pay-Mor Dry Cleaners; SeaTac Plaza Corporation; Restrictive  
Covenant and No Further Action Letter*

Dear Dan:

Thank you for all your assistance in finalizing the Restrictive Covenant for the former Y-Pay-Mor Dry Cleaners site owned by the SeaTac Plaza Corporation. I have forwarded the document to my client for review and signature.

You requested information regarding the appropriate person to address a No Further Action letter to. That person would be:

Rich J. Gamba  
Vice-President  
Citibank Global Asset Management  
Citibank, N.A.  
153 East 53rd Street, Suite 5600  
New York, New York 10043

Re: SeaTac Plaza Corporation

166986.1/3k%\$/013033.00001

Mr. Dan Cargill  
April 7, 1998  
Page 2

The Norman Company is the local management company for SeaTac Plaza Corporation properties. Please call if you need any more information.

Sincerely,



Alison Wachterman

AW:jmb

cc: Ms. Lita Johnson

**DEPARTMENT OF ECOLOGY  
NORTHWEST REGIONAL OFFICE**

June 11, 1998

TO: File

FROM: Dan Cargill   
Toxics Cleanup Program, NWRO

SUBJECT: Y-Pay-Mor Cleaners Restrictive Covenant

On March 2, 1998, I received a draft restrictive covenant for this site from Alison Wachterman based on a copy of the model RC I had e-mailed to her. I forwarded it on to Maia Bellon because I questioned Paragraph 8. Maia's comments were that the first portion of paragraph 8 was acceptable, the last sentence was not. I relayed this to Ms Wachterman.

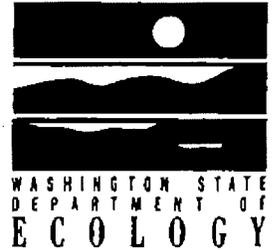
Her letter of April 7, 1998 is the last contact on the subject.

DC:dc

cc:

Re: Y Pay More! old trap

DEPARTMENT OF ECOLOGY  
NORTHWEST REGIONAL OFFICE  
FACSIMILE COVER SHEET



DATE: 7/21/98

TIME: \_\_\_\_\_

Number of Pages: 4 Plus Cover Sheet

TO: Emily Schneider

FAX #: 410 785 6220

FROM: Lydia Lindwall

PHONE: 425 649-7023 SECTION: TCP

Friday 360 407-7205

Department of Ecology  
Northwest Regional Office  
3190 - 160th Avenue S.E.  
Bellevue, WA 98008-5452  
Phone: (425) 649-7000  
Fax: (425) 649-7098

COMMENTS: IT LOOKS like the RC is ALL that  
is needed - with provisions for monitoring  
Since that was in 1995 we would want to  
See those sampling results see p2 #2 -  
We have never received a copy of the RC  
Filed with King County -

**From** Elaine Atkinson  
Ecology - NWRO

INCLUDE  
MAIL  
STOPS



**ECOLOGY - NWRO**  
"To Provide Faster Service  
at Lower Cost"

**Subject**

FILE #

Y. Pay-Mor Dry Cleaner

**To** Maia Bellon  
MS 4-0117

PLEASE  
REPLY BY:

NO REPLY  
REQUIRED

**Message**

FOLD

Hi Maia. You may or may not have heard that I'm leaving Ecology, so I'm trying to wrap up a LOT of paperwork. This proposed restrictive covenant came in recently. Dan Cargill will be the interim IRAP coordinator until they hire a permanent one. So this site will now be handled by him or his designee. Please coordinate with Dan.

It's been great working with you! Thought you also might like to know that Ken's Radiator is all cleaned up (or at least that's what the rumor is).

FOLD

SIGNATURE  
Elaine Atk

PHONE NO.  
(425) 649-7042

DATE  
7/28

**Reply**

SIGNATURE

PHONE NO.

DATE

LAW OFFICES

SHORT CRESSMAN & BURGESS P.L.L.C.

PAUL R. CRESSMAN, SR., P.S.  
JOHN O. BURGESS  
BRIAN L. COMSTOCK  
ROBERT E. HEATON  
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LISA WOLFARD  
KERRY S. BUCKLIN\*

\* MEMBER OF PATENT BAR,  
USPTO

999 THIRD AVENUE, SUITE 3000  
SEATTLE, WASHINGTON 98104-4088  
FAX: (206) 340-8856  
(206) 682-3333

ANN T. WILSON  
WILLIAM A. DURGE  
CLAUDIA CRAWFORD  
WALTER H. OLSEN, JR.  
ALISON WACHTERMAN  
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DEREK N. KO  
R. BRENT WALTON  
CHRIS PARIAS

RECEIVED  
AUG 25 1998  
DEPT. OF ECOLOGY

August 21, 1998

KENNETH P. SHORT  
DOUGLAS R. HARTWICH  
SAMUEL S. CHUNG  
OF COUNSEL

JOSEF DIAMOND  
COUNSEL TO THE FIRM

Mr. Dan Cargill  
Department of Ecology  
3190 - 106th S.E.  
Bellevue, WA 98008-5452

*Re: Y-Pay-Mor Drycleaners; SeaTac Plaza Corporation;  
Recorded Restrictive Covenant*

Dear Mr. Cargill:

I am enclosing with this letter a copy of the Department of Ecology's approved Restrictive Covenant as recorded in the office of the King County Auditor under File No. 9808101434. I understand the terms of this Restrictive Covenant were approved by you in conjunction with Alison Wachterman of our office. Ms. Wachterman has left our office and I will be handling the wrap-up of this matter.

As I understand the situation, we have now completed all of the steps necessary for the Department of Ecology to issue a formal No Further Action letter on the Y-Pay-Mor Drycleaners site. We formally request that the Department do so at its earliest convenience. By letter to you dated April 7, 1998, Ms. Wachterman advised that the appropriate person to address the Department's final NFA letter would be Rich J. Gamba. I am enclosing another copy of that letter for your convenience.

Mr. Dan Cargill  
August 21, 1998  
Page - 2

I would like to receive a copy of the final NFA letter when it is sent to Mr. Gamba so I may include it in my file and distribute it to the Northwest property managers, Trammel Crow.

If you have any questions about this matter, please call at your convenience.

Sincerely,

A handwritten signature in black ink, appearing to read "Scott M. Missall", with a long horizontal flourish extending to the right.

Scott M. Missall

SMM/jmb

Enclosures

cc: Herb Brooks (w/encs.)

**COPY**

9808101434 03:26:00 PM KING COUNTY RECORDS 004 THIS 11:00

Short Cressman & Burgess P.L.L.C.  
Attn: Scott M. Missall  
3000 First Interstate Center  
999 Third Avenue  
Seattle, WA 98104-4008

9808101434

<b>Document Title</b>	Declaration of Restrictive Covenant
<b>Reference Number(s) of Related Documents</b>	N/A
<b>Grantor</b>	SeaTac Plaza Corporation
<b>Grantee</b>	Evergreen Plaza, a Planned Unit Development
<b>Legal Description</b>	Space A-6, 2210 S. 320th Street, Federal Way, Washington, located within Lot 2, KCSP No. 1079107, Recording No. 7912260667, being a portion of Tract A, Evergreen Plaza, a Planned Unit Development, Plats Vol. 100, pages 74 and 75
<b>Parcel Number(s)</b>	242320-0050-00

**RESTRICTIVE COVENANT**

**SEATAC PLAZA CORPORATION**

2210 S. 320th Street, Space A-6; Former Y-Pay -Mor Dry Cleaners

This Declaration of Restrictive Covenant is made pursuant to RCW 70.105D.030(1)(f) and (g) and WAC 173-340-440 by SEATAC PLAZA CORPORATION, its successors and assigns.

An independent remedial action (hereafter "Remedial Action") occurred at the property that is the subject of this Restrictive Covenant. The Remedial Action conducted at the property is described in the following documents:

Preliminary Remedial Investigation, by AGRA Earth and Environmental (formerly RZA AGRA), dated November 1992.

Remediation System Installation, by AGRA Earth and Environmental (formerly RZA AGRA), dated October 1993.

Soil Vapor Extraction Remediation System, Performance Monitoring Record, by AGRA Earth and Environmental (formerly RZA AGRA), dated February 7, 1994.

Independent Remedial Action Report, by AGRA Earth and Environmental (formerly RZA AGRA), dated December 22, 1994.

These documents are on file at the Northwest Regional Office of the State of Washington Department of Ecology (hereafter "Ecology").

This restrictive Covenant is required because the Remedial Action resulted in residual concentrations of two contaminants which exceed the Model Toxics Control Act (MTCA) cleanup levels in the soil in two specific locations located under the building foundation.

The undersigned, SEATAC PLAZA CORPORATION, is the fee owner of real property (hereafter "Property") in the County of King, State of Washington, that is subject of this Restrictive Covenant. The Property is legally described as follows:

That property commonly known as Space A-6, 2210 S. 320th Street, Federal Way, Washington, located within Lot 2 as delineated on King County short Plat No. 1079107, recorded under King County Recording No. 7912260667, being a portion of Tract A, Evergreen Plaza, a Planned Unit Development, according to the plat thereof recorded in Volume 100 of Plats, pages 74 and 75, in King County, Washington.

SEATAC PLAZA CORPORATION makes the following declaration as to limitations, restrictions, and uses to which the Property may be put and specifies that such declarations shall constitute covenants to run with the land, as provided by law and shall be binding on all parties and all persons claiming under them, including all current and future owners of any portion of or interest in the Property (hereafter "Owner").

9808101434

**Section 1.** A portion of the Property contains soil contaminated with cis-1,2-dichloroethene and tetrachloroethane, located under the building foundation at confirmation borings CB-4 and CB-5 as shown on Exhibit A. The Owner shall not alter, modify, or remove the existing structure(s) in any manner that may result in the release or exposure to the environment of that contaminated soil or create a new exposure pathway without prior written approval from Ecology.

**Section 2.** Any activity on the Property that may interfere with the integrity of the Remedial Action and continued protection of human health and the environment is prohibited.

**Section 3.** Any activity on the Property that may result in the release or exposure to the environment of a hazardous substance that remains on the Property as part of the Remedial Action, or create a new exposure pathway, is prohibited without prior written approval from Ecology.

**Section 4.** The Owner of the Property must give thirty (30) day advance written notice to Ecology of the Owner's intent to convey any interest in the Property. No conveyance of title, easement, lease, or other interest in the Property shall be consummated by the Owner without adequate and complete provision for continued monitoring, operation, and maintenance of the Remedial Action.

**Section 5.** The Owner must restrict leases to uses and activities consistent with the Restrictive Covenant and notify all lessees of the restrictions on the use of the Property.

**Section 6.** The Owner must notify and obtain approval from Ecology prior to any use of the Property that is inconsistent with the terms of this Restrictive Covenant. Ecology may approve any inconsistent use only after public notice and comment.

**Section 7.** The Owner shall allow authorized representatives of Ecology the right to enter the Property at reasonable times for the purpose of evaluating the Remedial Action; to take samples, to inspect Remedial Actions conducted at the Property, and to inspect records that are related to the Remedial Action.

**Section 8.** The Owner of the Property reserves the right under WAC 173-340-440 to record an instrument that provides that this Restrictive Covenant shall no longer limit use of the Property or be of any further force or effect. However, such an instrument may be recorded only if Ecology, after public notice and opportunity for comment, concurs.

DATED this 24<sup>th</sup> day of July, 1998.

SEATAC PLAZA CORPORATION

By Richard J. Gamba

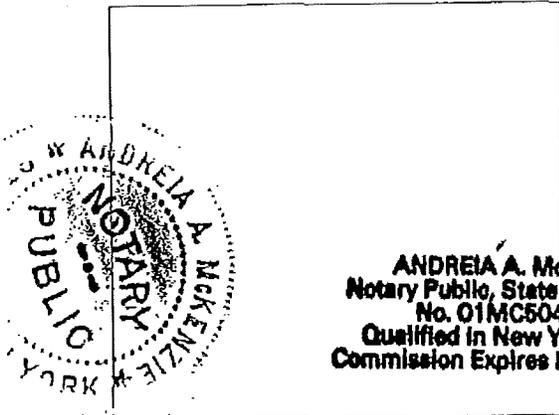
Its Vice President

STATE OF New York )  
 ) ss:  
COUNTY OF New York )

I certify that I know or have satisfactory evidence that Richard J. Gamba is the person who appeared before me, and said person acknowledged that he signed this instrument, on oath stated that he was authorized to execute this instrument and acknowledged it as the Vice President of SeaTac Plaza Corporation, a corporation, to be the free and voluntary act of such party for the uses and purposes mentioned in this instrument.

DATED: July 24<sup>th</sup>, 1998.

9808101434



Andreia A. McKenzie  
Print Name: ANDREIA A. MCKENZIE  
NOTARY PUBLIC in and for the State of  
NEW YORK, residing at 446 Central Pl. W.  
My Appointment expires: 5-15-99

**ANDREIA A. MCKENZIE**  
Notary Public, State of New York  
No. 01MC5043758  
Qualified in New York County  
Commission Expires May 15, 1999

(Use this space for notarial stamp/seal)



STATE OF WASHINGTON  
DEPARTMENT OF ECOLOGY

Northwest Regional Office, 3190 - 160th Ave S.E. • Bellevue, Washington 98008-5452 • (425) 649-7000

October 22, 1998

Mr. Rich J. Gambia  
Vice President  
Citibank Global Asset Management  
Citibank, N.A.  
153 East 53<sup>rd</sup> Street, Suite 5600  
New York, NY 10043

Dear Mr. Gamba:

Re: Independent Remedial Action  
Sea-Tac Plaza/Former Y-Pay-Mor Dry Cleaner,  
Space A-6, 2210 S. 320<sup>th</sup> Street, Federal Way, Washington

Thank you for submitting the results of your independent remedial actions for review by the State of Washington Department of Ecology (Ecology). Ecology appreciates your initiative in pursuing this administrative option under the Model Toxics Control Act (MTCA).

Ecology's Toxics Cleanup Program has reviewed the following information regarding the former Y-Pay-Mor Dry Cleaner facility located at Space A-6, 2210 S. 320<sup>th</sup> Street, Federal Way:

1. Preliminary Remedial Investigation, prepared by RZA AGRA, Inc. dated November 1992;
2. Remediation System Installation, prepared by RZA AGRA, Inc. dated October 1993;
3. Soil Vapor Extraction remediation System, Performance Monitoring Record, prepared by RZA AGRA, Inc. dated February 7, 1994;
4. Independent Remedial Action Report, prepared by AGRA Earth & Environmental, Inc. dated December 22, 1994;
5. Biannual Sampling of Monitoring Well MW-3 prepared by AGRA Earth & Environmental, Inc. dated 20 August 1997;
6. Miscellaneous information in the Central Files of the Northwest Regional Office (NWRO) related to the site.

The reports listed above will be kept in the Central Files of the Northwest Regional Office of Ecology for review by appointment only. Appointments can be made by calling Sally Perkins at the NWRO at (425) 649-7190.

Rich J. Gamba  
October 22, 1998  
Page 2

Based upon the information in the reports listed above, Ecology has determined that, at this time, the release of cis-1,2-dichloroethene, trichloroethane, and tetrachloroethane into the soil and groundwater no longer poses a threat to human health or the environment.

Therefore, Ecology is issuing this determination that no further remedial action is necessary at this site under MTCA, chapter 70.105D RCW. However, please note that because your actions were not conducted under a consent decree with Ecology, this letter is written pursuant to RCW 70.105D.030(1)(i) and does not constitute a settlement by the state under RCW 70.105D.040(4) and is not binding on Ecology.

In addition, the Restrictive Covenant filed on your property dated July 24, 1998, is a condition to maintain Ecology's no further action determination. The Restrictive Covenant is attached to this letter as Attachment A. Ecology's no further action determination automatically terminates and will have no force and effect if any portion of the Restrictive Covenant is violated.

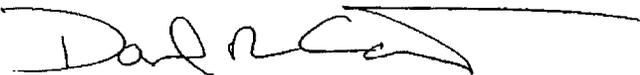
Ecology's no further action determination is made only with respect to the release identified in the independent remedial action report dated December 22, 1994. This no further action determination applies only to the area of the property affected by the release identified in the report at , 2210 S. 320<sup>th</sup> Street, Federal Way. It does not apply to any other release or potential release at the property, any other areas on the property, nor any other properties owned or operated by SeaTac Plaza Corporation.

Ecology will update its database to reflect this "No Further Action" determination. Your site will not appear in future publications of the Confirmed & Suspected Contaminated Sites Report (previously known as the Affected Media and Contaminants Report.)

The state, Ecology, and its officers and employees are immune from all liability and no cause of action of any nature may arise from any act or omission in providing this determination.

If you have any questions, please contact me at 425-649-7023 or by e-mail at [daca461@ecy.wa.gov](mailto:daca461@ecy.wa.gov).

Sincerely,



Daniel R. Cargill  
Toxics Cleanup Program

DC:dc  
Enclosure

cc: Scott M. Missall, Short Cressman & Burgess

**DEPARTMENT OF ECOLOGY  
TOXICS CLEANUP PROGRAM  
SITE DATA SUMMARY as of 10/23/98**

**FACILITY SITE ID: 2518**

**SITE NAME: Y PAY MOR DRYCLEANER**

**TCP ID: N-17-5295-000**

**SITE LOCATION INFORMATION**

ADDRESS: 2210 S 320TH

DEGREES MINUTES SECONDS

TOWNSHIP RANGE SECTION

LATITUDE: 122 18 16.452

0 0 0

CITY: FEDERAL WAY

LONGITUDE: 47 19 0.372

ZIP CODE: 98003

LEGISLATIVE DISTRICT #: 30

COUNTY: KING

TAX PARCEL #:

CONGRESSIONAL DISTRICT #: 9

**SITE STATUS INFORMATION**

ECOLOGY STATUS: 4 Independent RA

WARM BIN #:

INDEPENDENT STATUS: 3 Independent final RA report received

STATUTE: 2 MTCA only

PROGRAM PLAN: 3 IRAP

ERTS ID: N18783

LUST ID:

RESPONSIBLE UNIT: NORTHWEST

PROJECT CODE:

SITE MANAGER: ATKINSON, ELAINE

ENTERED DATE: 9/19/95

NFA CODE: 1 No further action after assessment (or IRAP)

SITE UPDATE DATE: 10/23/98

NFA DATE: 10/22/1998

**SITE COMMENTS**

IRAP review determined NFA status - deed restriction recorded. Second IRAP review 1997-1998.

**AFFECTED MEDIA AND CONTAMINANTS INFORMATION**

MEDIA	STATUS	#1	#2	#3	#4	#5	#6	#7	#8	#9	#10	#11	#12	#13	#14	#15	#16	#17	DW TYPE:
4 Soil	R	R																	
1 Groundwater	R	R																	

**AFFECTED MEDIA AND CONTAMINANTS LEGEND**

#1 = Base/Neutral Organics  
#2 = Halogenated Organic Compounds  
#3 = Metals-Priority Pollutants  
#4 = Metals-Other  
#5 = PCB  
#6 = Pesticides

#7 = Petroleum Products  
#8 = Phenolic Compounds  
#9 = Non-Halogenated Solvents  
#10 = Dioxins  
#11 = PAH  
#12 = Reactive Wastes

#13 = Corrosive Wastes  
#14 = Radioactive Wastes  
#15 = Conventional Contaminants, Organic  
#16 = Conventional Contaminants, Inorganic  
#17 = Asbestos

**VCP CLEANUP REVIEW FILE CHECKLIST - OLD IRAP**

Site Name: Y-Pay-Moc Drycleaners  
 Address: 2210 S. 320th Street  
 City/County: Federal Way King 98003  
 Reviewer: Atkinson / Cargill

ERTS: N 18783 / N5617  
 LUST Number #:                       
 UST Number #:                       
 SIS Number: N-17-5295-000

- Draft ERTS form sent to Complaint Tracker
  - Central File **OUT CARD** prepared
  - Review/Receipt Letter prepared
  - Site Register Notice (Rcpt of New Rpts)
  - IITS database - ERTS info entered  Yes  No Record  Via LUSTbase  Updated
  - IRAPtrak Site Info entered
  - IRRP - Independent Review Paid:  IRRU - Independent Report Unpaid:
  - Start date: 11/6/95 90-day date:
  - Completion date: 10/22/98 Total Hours: 32.0 (Incl. 3.0 for Admin)
  - Initial Pmt: \$ 1000 Fee Balance Due: \$ 1000 Paid
  - Status: in process  completed  cancelled
  - Review results: 1 6 NFA Status:
- 1 = no further action                      4 = interim status letter sent  
 2 = further cleanup action needed      5 = long-term Monitoring  
 3 = incomplete report received         6 = deed restriction

- IRAPtrak Site Info Updated
- IITS database - Updated  Yes  No Record  Via LUSTbase  Updated
- Updated ERTS form to Complaint Tracker  Completed ERTS form Rec'd
- Environmental Indicators Completed long ago  Saved to disk
- Site Register Notice - Review Complete  Hold pending Fee Balance  SR Notice released
- UST/LUST Database Update - Forwarded to UST Tracker
- Forward Entire File to:                      L. Bardy for SIS update/listing                      Central Files

NOTES: \_\_\_\_\_

*FS = 2518*

LAW OFFICES  
SHORT CRESSMAN & BURGESS P.L.L.C.

999 THIRD AVENUE, SUITE 3000  
SEATTLE, WASHINGTON 98104-4088  
FAX: (206) 340-8856  
(206) 682-3333

RECEIVED

NOV 25 1998

DEPT OF ECOLOGY

November 24, 1998

PAUL R. CRESSMAN, SR., P.S.  
JOHN O. BURGESS  
BRIAN L. COMSTOCK  
JOHN H. STRASBURGER  
JAMES A. OLIVER  
DAVID R. KOOPMANS  
KENNETH L. MYER  
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PAUL R. CRESSMAN, JR.  
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ROBERT E. HEATON  
SAMUEL S. CHUNG  
OF COUNSEL

JOSEF DIAMOND  
COUNSEL TO THE FIRM

\*\* ADMITTED IN GEORGIA

\* MEMBER OF PATENT BAR,  
USPTO

Mr. Dan Cargill  
Department of Ecology  
3190 - 106th S.E.  
Bellevue, WA 98008-5452

Re: *Y-Pay-Mor Drycleaners; Confirmational Soil Borings*

Dear Mr. Cargill:

Pursuant to your telephone call last month, I reviewed our files to locate the confirmational soil borings for the Y-Pay-Mor drycleaner's site. In particular, I reviewed the Independent Remedial Action Report, Former Y-Pay-Mor Drycleaners, Best Shopping Plaza, 2210 320th Street South, Federal Way, Washington (December 1994) prepared by AGRA Earth & Environmental. You should have a copy of that document in your files.

I am enclosing a copy of Table 5 from the narrative report pursuant to your request. Table 5 is a summary of confirmational boring/soil analyses performed on November 16, 1994. I believe this contains the information which you requested. In addition, the IRAP narrative summary, at Section 1.0, notes that "confirmation for remediation of soil PCE contamination indicates that one soil sample, of seven total, exceeded MTCA Method A cleanup for soil by 0.3 ppm PCE."

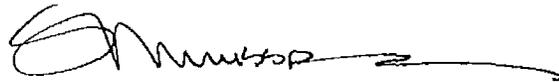
Although I was not involved with the cleanup of this site from the beginning, it is important to remember that the independent remedial action conducted on the site and accepted by the Department focused largely on clean up of groundwater contamination. See IRAP, Section 5.0. That is to be expected in a situation where ongoing businesses, buildings

Mr. Dan Cargill  
November 24, 1998  
Page - 2

and parking lots cover the property in question. Subsequent monitoring reports, also in your possession, confirm that the site meets applicable groundwater cleanup standards.

Please let me know if you have any more questions about this matter. I trust that this information is sufficient for your needs.

Sincerely,

A handwritten signature in black ink, appearing to read "Scott M. Missall", with a long horizontal flourish extending to the right.

Scott M. Missall

SMM/jmb  
Enclosures  
cc: Herb Brooks (w/encs.)

**Table 5: Summary of Confirmational Boring/Soil Analyses**  
**Y-Pay-Mor Dry Cleaners**  
**Federal Way, Washington**  
**AGRA Earth & Environmental, Inc Project No. 11-07883-11**

Sample I.D.	Date Collected	Depth Collected (ft)	OVM Reading (ppm)	cis-1,2-DCE (ppm)	PCE (ppm)	Methylene Chloride (ppm)
B-1/S-1	16-Nov-94	6.5 - 8.0	0.0	<0.1	<0.1	<0.1
B-2/S-1	16-Nov-94	5.0 - 6.5	0.0	<0.1	<0.1	<0.1
B-3/S-1	16-Nov-94	5.0 - 6.5	0.0	0.11	<0.1	<0.1
B-4/S-1	16-Nov-94	5.0 - 6.5	0.0	0.33	1.3	<0.1
B-5/S-1	16-Nov-94	6.5 - 8.0	0.0	71	<0.1	<0.1
B-6/S-1	16-Nov-94	5.0 - 6.5	0.0	<0.1	<0.1	<0.1
B-7/S-1	16-Nov-94	5.0 - 6.5	0.0	0.8	<0.1	<0.1
MTCA Method "A" Cleanup Level						
MTCA Method "B" Cleanup Level				NA	0.5	0.5
				<del>888</del> 8	NA	NA

**Notes:**

cis-1,2-DCE = cis-1,2-Dichloroethene  
PCE = Tetrachloroethene  
MTCA = Model Toxics Control Act  
OVM used contained an 11.8 eV ionization potential lamp. OVM vapor reading was taken from soil vapor effluent immediately after withdrawing soil vapor sample.  
All analytes are cover under EPA Method 8010 for volatile organics. This Method covers a broad scan of analytes. Indicated above are the only analytes in the broad scan that were measured above the laboratory detection limit. Analytes not shown, but covered under Method 8010 were below the laboratory detection limit for all samples.  
All concentrations are expressed in parts per million (ppm).

FAX NUMBERS  
(212) 848-7300

**SHEARMAN & STERLING**  
599 Lexington Avenue  
New York, New York 10022  
Communications Dept. Telephone: (212) 848-8434

**FAX COVER SHEET**

December 7, 1998

Reference No. 01481/00054

Fax Recipient(s)				
Name	Firm	Location	Fax Phone	Office Phone
Mr. Daniel R. Cargill	State of Washington Department of Ecology	Bellevue, WA	(425) 649-7098	(425) 649-7000
Philip M. Roberts, Esq.	Ryan, Swanson & Cleveland, PLLC	Seattle, WA	(206) 583-0359	(206) 654-2236
Mr. D. Michael Dunne			(253) 852-8433	(253) 852-6400
Mr. Timothy M. Baydala		New York City	(212) 621-9567	(212) 621-9570
Mr. Richard Gamba	Citibank	New York City	(212) 793-2091	(212) 559-9031

**From**

Name: Michael H. Torkin  
Telephone: (212) 848-4802  
Room: 1952

Pages transmitted (including cover sheet): 5

**Comments:**

19TH FLOOR  
SERVICE CENTER  
SHEARMAN & STERLING  
DEC 7 11 59 AM '98

**Confidentiality Note:** The information transmitted in this facsimile message is sent by an attorney or his/her agent, is intended to be confidential and for the use of only the individual or entity named above. If the recipient is a client, this message may also be for the purpose of rendering legal advice and thereby privileged. If the reader of this message is not the intended recipient, you are hereby notified that any retention, dissemination, distribution or copy of this telecopy is strictly prohibited. If you have received this facsimile in error, please immediately notify us by telephone and return the original message to us at the address above via the mail service (we will reimburse postage). Thank you.

Please note the total number of pages to be transmitted. If you do not receive the number indicated, please call the Communications Department at (212) 848-8434.

SHEARMAN & STERLING

FAX: 212-848-7179  
TELEX: 667290 WUY

599 LEXINGTON AVENUE  
NEW YORK, N.Y. 10022-6069  
212 848-4000

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SAN FRANCISCO  
SINGAPORE  
TOKYO  
TORONTO  
WASHINGTON, D.C.

WRITER'S DIRECT NUMBER:

(212) 848-4802

December 7, 1998

BY TELEFAX

Mr. Daniel R. Cargill  
State of Washington Department of Ecology  
Northwest Regional Office  
3190 - 160<sup>th</sup> Ave S.E.  
Bellevue, Washington 96008-5452

Sea-Tac Plaza  
Federal Way, Washington

Dear Mr. Cargil:

Reference is made to that certain restrictive covenant dated July 24, 1998 and recorded on August 10, 1998, under Recording No. 988101434 in the records of King County, Washington made by Sea-Tac Plaza Corporation ("Owner") pursuant to RCW 7.105D.030(1)(f) and (g) and WAC 173-340-440 (the "Restrictive Covenant").

Pursuant to Section 4 of the Restrictive Covenant, Owner hereby gives Northwest Regional Office of the State of Washington Department of Ecology notice of Owner's intent to convey its entire interest in the above-mentioned property. Owner has made adequate and complete provision for continued monitoring, operation, and maintenance of the Remedial action; first, because none further is needed as evidenced by the letter attached hereto and second, because the purchaser of the property will take the same subject to the provisions of the Restrictive Covenant.

Mr. Daniel R. Cargill

2

December 7, 1998

If you should have any questions or comments, please do not hesitate to give me a call.

Sincerely,



Michael H. Torkin

Enclosure

cc: Philip M. Roberts, Esq. (w/encl.)  
D. Michael Dunne (w/encl.)  
Timothy Baydala (w/encl.)  
Richard Gamba (w/encl.)  
Chris M. Smith, Esq. (w/o encl.)  
Gary P. Curwin, Esq. (w/encl.)  
Lynn P. Constantino, Esq. (w/encl.)

Buyer is

DGC II LLC

Washington Limited Liability Co.

25022 104th Ave. Suite B

Kent WA 98031



STATE OF WASHINGTON

DEPARTMENT OF ECOLOGY

Northwest Regional Office, 3799 - 160th Ave S.E. • Bellevue, Washington 98008-5452 • (425) 649-7000

October 22, 1998

Mr. Rich J. Gambia  
Vice President  
Citibank Global Asset Management  
Citibank, N.A.  
153 East 53<sup>rd</sup> Street, Suite 5600  
New York, NY 10043

Dear Mr. Gambia:

Re: Independent Remedial Action  
Sea-Tac Plaza/Former Y-Pay-Mor Dry Cleaner,  
Space A-6, 2210 S. 320<sup>th</sup> Street, Federal Way, Washington

Thank you for submitting the results of your independent remedial actions for review by the State of Washington Department of Ecology (Ecology). Ecology appreciates your initiative in pursuing this administrative option under the Model Toxics Control Act (MTCA).

Ecology's Toxics Cleanup Program has reviewed the following information regarding the former Y-Pay-Mor Dry Cleaner facility located at Space A-6, 2210 S. 320<sup>th</sup> Street, Federal Way:

1. Preliminary Remedial Investigation, prepared by RZA AGRA, Inc. dated November 1992;
2. Remediation System Installation, prepared by RZA AGRA, Inc. dated October 1993;
3. Soil Vapor Extraction remediation System, Performance Monitoring Record, prepared by RZA AGRA, Inc. dated February 7, 1994;
4. Independent Remedial Action Report, prepared by AGRA Earth & Environmental, Inc. dated December 22, 1994;
5. Biannual Sampling of Monitoring Well MW-3 prepared by AGRA Earth & Environmental, Inc. dated 20 August 1997;
6. Miscellaneous information in the Central Files of the Northwest Regional Office (NWRO) related to the site.

The reports listed above will be kept in the Central Files of the Northwest Regional Office of Ecology for review by appointment only. Appointments can be made by calling Sally Perkins at the NWRO at (425) 649-7190.

Rich J. Gamba  
October 22, 1998  
Page 2

Based upon the information in the reports listed above, Ecology has determined that, at this time, the release of cis-1,2-dichloroethene, trichloroethane, and tetrachloroethane into the soil and groundwater no longer poses a threat to human health or the environment.

Therefore, Ecology is issuing this determination that no further remedial action is necessary at this site under MICA, chapter 70.105D RCW. However, please note that because your actions were not conducted under a consent decree with Ecology, this letter is written pursuant to RCW 70.105D.030(1)(c) and does not constitute a settlement by the state under RCW 70.105D.040(4) and is not binding on Ecology.

In addition, the Restrictive Covenant filed on your property dated July 24, 1998, is a condition to maintain Ecology's no further action determination. The Restrictive Covenant is attached to this letter as Attachment A. Ecology's no further action determination automatically terminates and will have no force and effect if any portion of the Restrictive Covenant is violated.

Ecology's no further action determination is made only with respect to the release identified in the independent remedial action report dated December 22, 1997. This no further action determination applies only to the area of the property affected by the release identified in the report at 2210 S. 320<sup>th</sup> Street, Federal Way. It does not apply to any other release or potential release at the property, any other areas on the property, nor any other properties owned or operated by SeaTac Plaza Corporation.

Ecology will update its database to reflect this "No Further Action" determination. Your site will not appear in future publications of the Confirmed & Suspected Contaminated Sites Report (previously known as the Affected Media and Contaminants Report)

The state, Ecology, and its officers and employees are immune from all liability and no cause of action of any nature may arise from any act or omission in providing this determination.

If you have any questions, please contact me at 425-649-7023 or by e-mail at [daca461@ecy.wa.gov](mailto:daca461@ecy.wa.gov).

Sincerely,



Daniel R. Cargill  
Toxics Cleanup Program

DC:dc  
Enclosure

cc: Scott M. Missall, Short Cressman & Burgess

LAWYERS

RYAN, SWANSON & CLEVELAND, PLLC

1201 Third Avenue, Suite 3400  
Seattle, Washington 98101-3034  
Facsimile (206) 583-0359 (34th Flr)  
Facsimile (206) 621-7568 (33rd Flr)  
Telephone (206) 464-4224

Date: December 23, 1998

Client/Mtr No.: 10350-7

Number of pages (including this cover page): 5

To:	Facsimile No.:	Telephone No.:
Dan Cargill, Wash. State Dept. Ecology	425-649-7161	
From:		
Philip M. Roberts		
The original of this facsimile transmission will be:		
<input checked="" type="checkbox"/> retained on file <input type="checkbox"/> sent to you via U.S. Mail <input type="checkbox"/> sent to you via courier		

PLEASE NOTIFY US IMMEDIATELY AT (206) 464-4224 IF THIS TRANSMISSION IS NOT RECEIVED PROPERLY.

COMMENTS:

THIS FACSIMILE MESSAGE IS A PRIVILEGED AND CONFIDENTIAL COMMUNICATION, TRANSMITTED FOR THE EXCLUSIVE USE OF THE ADDRESSEE. THIS COMMUNICATION MAY NOT BE COPIED OR DISSEMINATED EXCEPT AS DIRECTED BY THE ADDRESSEE. IF YOU RECEIVE THIS COMMUNICATION IN ERROR, PLEASE NOTIFY US IMMEDIATELY BY TELEPHONE, AND MAIL THE COMMUNICATION TO US AT OUR LETTERHEAD ADDRESS ABOVE.



Scott Crispin & Burgess P.L.L.C.  
Attn: Scott M. Misall  
3000 First Interstate Center  
999 Third Avenue  
Seattle, WA 98104-4008

Document Title	Declaration of Restrictive Covenant
Reference Number(s) of Related Documents	N/A
Grantor	Seatac Plaza Corporation
Grantee	Evergreen Plaza, a Planned Unit Development
Legal Description	Space A-6, 2210 S. 320th Street, Federal Way, Washington, located within Lot 3, KCSP No. 1079107, Recording No. 7912260667, being a portion of Tract A, Evergreen Plaza, a Planned Unit Development, Plat Vol. 100, pages 74 and 75
Parcel Number(s)	242320-0050-00

9808101434

RECORDING INFORMATION FOR COUNTY RECORDS USE ONLY

### RESTRICTIVE COVENANT

#### SEATAC PLAZA CORPORATION

2210 S. 320th Street, Space A-6; Former Y-Pay-Mor Dry Cleaners

This Declaration of Restrictive Covenant is made pursuant to RCW 70.105D.030(1)(f) and (g) and WAC 173-340-440 by SEATAC PLAZA CORPORATION, its successors and assigns.

An independent remedial action (hereafter "Remedial Action") occurred at the property that is the subject of this Restrictive Covenant. The Remedial Action conducted at the property is described in the following documents:

Preliminary Remedial Investigation, by AGRA Earth and Environmental (formerly RZA AGRA), dated November 1992.

Remediation System Installation, by AGRA Earth and Environmental (formerly RZA AGRA), dated October 1993.

Soil Vapor Extraction Remediation System, Performance Monitoring Record, by AGRA Earth and Environmental (formerly RZA AGRA), dated February 7, 1994.

Independent Remedial Action Report, by AGRA Earth and Environmental (formerly RZA AGRA), dated December 22, 1994.

These documents are on file at the Northwest Regional Office of the State of Washington Department of Ecology (hereafter "Ecology").

This restrictive Covenant is required because the Remedial Action resulted in residual concentrations of two contaminants which exceed the Model Toxics Control Act (MTCA) cleanup levels in the soil in two specific locations located under the building foundation.

The undersigned, SEATAC PLAZA CORPORATION, is the fee owner of real property (hereafter "Property") in the County of King, State of Washington, that is subject of this Restrictive Covenant. The Property is legally described as follows:

That property commonly known as Space A-6, 2210 S. 320th Street, Federal Way, Washington, located within Lot 2 as delineated on King County short Plat No. 1079107, recorded under King County Recording No. 7912260667, being a portion of Tract A, Evergreen Plaza, a Planned Unit Development, according to the plat thereof recorded in Volume 100 of Plats, pages 74 and 75, in King County, Washington.

SEATAC PLAZA CORPORATION makes the following declaration as to limitations, restrictions, and uses to which the Property may be put and specifies that such declarations shall constitute covenants to run with the land, as provided by law and shall be binding on all parties and all persons claiming under them, including all current and future owners of any portion of or interest in the Property (hereafter "Owner").

9806101434

**Section 1.** A portion of the Property contains soil contaminated with cis-1,2-dichloroethene and tetrachloroethane, located under the building foundation at confirmation borings CB-4 and CB-5 as shown on Exhibit A. The Owner shall not alter, modify, or remove the existing structure(s) in any manner that may result in the release or exposure to the environment of that contaminated soil or create a new exposure pathway without prior written approval from Ecology.

**Section 2.** Any activity on the Property that may interfere with the integrity of the Remedial Action and continued protection of human health and the environment is prohibited.

**Section 3.** Any activity on the Property that may result in the release or exposure to the environment of a hazardous substance that remains on the Property as part of the Remedial Action, or create a new exposure pathway, is prohibited without prior written approval from Ecology.

**Section 4.** The Owner of the Property must give thirty (30) day advance written notice to Ecology of the Owner's intent to convey any interest in the Property. No conveyance of title, easement, lease, or other interest in the Property shall be consummated by the Owner without adequate and complete provision for continued monitoring, operation, and maintenance of the Remedial Action.

**Section 5.** The Owner must restrict leases to uses and activities consistent with the Restrictive Covenant and notify all lessees of the restrictions on the use of the Property.

**Section 6.** The Owner must notify and obtain approval from Ecology prior to any use of the Property that is inconsistent with the terms of this Restrictive Covenant. Ecology may approve any inconsistent use only after public notice and comment.

**Section 7.** The Owner shall allow authorized representatives of Ecology the right to enter the Property at reasonable times for the purpose of evaluating the Remedial Action; to take samples, to inspect Remedial Actions conducted at the Property, and to inspect records that are related to the Remedial Action.

**Section 8.** The Owner of the Property reserves the right under WAC 173-340-440 to record an instrument that provides that this Restrictive Covenant shall no longer limit use of the Property or be of any further force or effect. However, such an instrument may be recorded only if Ecology, after public notice and opportunity for comment, concurs.

9808101434

DATED this 27<sup>th</sup> day of July, 1998.

SEATAC PLAZA CORPORATION

By [Signature]

Its Vice President

STATE OF New York  
COUNTY OF New York

I certify that I know or have satisfactory evidence that Richard J. Gaska is the person who appeared before me, and said person acknowledged that he signed this instrument, on oath stated that he was authorized to execute this instrument and acknowledged it as the Vice President of Seatac Plaza Corporation, a corporation, to be the free and voluntary act of each party for the uses and purposes mentioned in this instrument.

DATED: July 27<sup>th</sup>, 1998.

[Signature]  
Print Name: ANDREA A. MORGAN  
NOTARY PUBLIC in and for the State of New York, residing at 416 Central Ave 1st  
My Appointment expires: 5-15-99



ANDREA A. MORGAN  
Notary Public, State of New York  
Commission Expires May 15, 1999

(Use this space for notarial stamp/ies.)

9808101434

D.C.G. <sup>II,</sup> LLC  
Wai Limhi Laktis Co  
D.C.G. L

25022 184th Ave SE Ste 13  
Rent 98031



STATE OF WASHINGTON  
DEPARTMENT OF ECOLOGY

Northwest Regional Office, 3190 - 160th Ave S.E. • Bellevue, Washington 98008-5452 • (425) 649-7000

December 23, 1998

Lynn P. Constantino, Esq.  
Shearman & Sterling  
599 Lexington Avenue  
New York, New York 10022

Dear Ms. Constantino:

Re: Sea-Tac Plaza, Federal Way, Washington

I am writing this at the request of Mr. Phillip M. Roberts to acknowledge receipt of Mr. Michael H. Torkin's letter of December 7, 1998, notifying the Washington Department of Ecology (Ecology) of the pending sale of the Sea-Tac Plaza property.

Mr. Roberts has informed me that the involved parties plan to close on December 28, 1998. He also informs me they are concerned that closing on the 28<sup>th</sup> would constitute a violation of the restrictive covenant's 30-day notice provision, causing the No Further Action letter to terminate. Please be advised that the letter Ecology received by fax on December 7, 1998, satisfies the intent of the notice provision. Transfer of the property as scheduled will not result in termination of the No Further Action determination.

If you have any questions regarding this letter or need further assistance, please don't hesitate to call me at (425) 649-7023.

Sincerely,

Daniel R. Cargill  
Toxics Cleanup Program

DC:dc

cc: Phillip M. Roberts, Esq. (via FAX)

New owner is  
DGC II, LLC  
A Washington Limited Liability Company  
250 22 104th Ave Suite B  
Kent WA 98031

FAX NUMBERS

(212) 848-7300

# SHEARMAN & STERLING

599 Lexington Avenue  
New York, New York 10022  
Communications Dept. Telephone: (212) 848-8434

19TH FLOOR  
TRINITY CENTER

50500 23 PM 6:01

SHEARMAN & STERLING

## FAX COVER SHEET

December 23, 1998

Reference No. 01481/00054

Fax Recipient(s)				
Name	Firm	Location	Fax Phone	Office Phone
Mr. Daniel R. Cargill	State of Washington Department of Ecology	Bellevue, WA	(425) 649-7161	(425) 649-7023

### From

Name: Michael H. Torkin  
Telephone: (212) 848-4802  
Room: 1952

Pages transmitted (including cover sheet)

Comments: As per your request, Sea Tac Plaza Corporation is selling Sea Tac Plaza to DCG II, L.L.C., a Washington limited liability company.

**Confidentiality Note:** The information transmitted in this facsimile message is sent by an attorney or his/her agent, is intended to be confidential and for the use of only the individual or entity named above. If the recipient is a client, this message may also be for the purpose of rendering legal advice and thereby privileged. If the reader of this message is not the intended recipient, you are hereby notified that any retention, dissemination, distribution or copy of this telecopy is strictly prohibited. If you have received this facsimile in error, please immediately notify us by telephone and return the original message to us at the address above via the mail service (we will reimburse postage). Thank you.

Please note the total number of pages to be transmitted. If you do not receive the number indicated, please call the Communications Department at (212) 848-8434.

July 7, 2014

## Notice of Intent to Sell Property

Via E-mail Only to: [dale.myers@ecy.wa.gov](mailto:dale.myers@ecy.wa.gov)  
Mr. Dale Myers  
Washington Department of Ecology

Ref: Notice of Intent to Sell Property  
2210 S. 320<sup>th</sup> Street  
Federal Way, WA  
Parcel No. 242320-0050-00

Dear Mr. Myers:

I am the listing broker for the subject property. My associate Bob spoke to you this morning and was advised that because of the existence of the attached Restrictive Covenants on title, our Seller would have to give the Department of Ecology 30 days written notice of his intent to sell the property.

Byung Chan Park is the owner of the property, and his signature above mine on this letter is formal 30 day notice that he intends to sell the property to Troy Gessel. Mr. Park has a signed around purchase and sale agreement, and closing is not expected inside of 30 days from today.

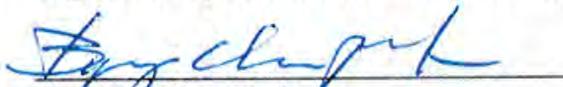
You also advised Bob that once the property is sold, another document would have to be sent to you by the buyers, notifying Ecology that they have assumed ownership of the property. We will let the buyers know exactly what they must do later today.

30 Day Notice of Intent to Sell  
SeaTac Plaza (242320-0050-00)  
Dale Myers, WA Dept. of Ecology  
July 7, 2014  
Page 2

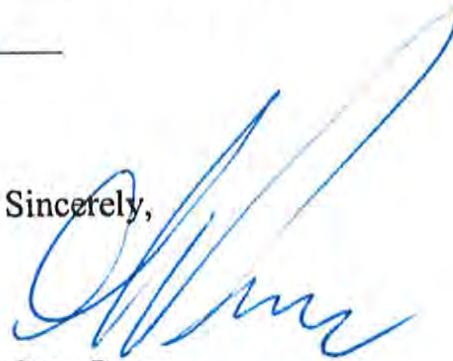
Please call me should you have any questions at all. Thank you, and God Bless.

“I am the owner of the SeaTac Plaza (parcel number 242320-0050-00), against which the attached Restrictive Covenants are recorded. This letter is my formal 30 day notice that I intend to sell the property within the next 60 days to Troy Gessel. I will advise the Department of Ecology when that sale is consummated, and will comply with any other Department requests necessary to complete the sale.”

Signed at Lynnwood, WA this 7<sup>th</sup> day of July, 2014.

  
Byung Chan Park

Sincerely,



Greg Perry  
Office No. 425-744-5314  
Cell No. 206-799-9610  
Fax No. 425-744-5355  
gregoryp@johnlscott.com  
John L. Scott Real Estate  
19221 – 36<sup>th</sup> Ave. W., Suite 106  
Lynnwood, WA 98036

RESTRICTIVE COVENANT



The undersigned, Sea-Tac Plaza Limited Partnership, is the current owner of real property in King County, Washington, legally described in the attached Exhibit A, hereafter referred to as the "Site". The Site contains subsurface areas which were the subject of a voluntary independent remedial action commenced by the owners in 1992 to respond to releases of certain dry cleaning solvents. Following installation of a vapor extraction system to remove solvents from the soils at portions of the Site, it has been confirmed that residual concentrations of solvents at levels exceeding the Method A cleanup guidelines as published in the Model Toxics Control Act ("MTCA") Chapter 173-340 WAC remain in portions of the site as follows.

1. Soils at a depth of 5 to 6.5 feet at the location of Boring B-4, as illustrated in Figure 2 of the AGRA Environmental report dated December 22, 1994, contained levels of tetrachloroethene (PCE) at 1.3 parts per million. This area lies under the foundation of the former Y-Pay-Mor Dry Cleaners.
2. Soils at a depth of 6.5 to 8 feet at the location of Boring B-5 as shown on Figure 2 of the AGRA Environmental report dated December 22, 1994, contained elevated levels (71 PPM) of Cis-1, 2, Dichloroethene. Boring B-5 is located beneath the foundation of the former Y-Pay-Mor Dry Cleaners.
3. As a result of spills at the former Y-Pay-Mor Dry Cleaners, portions of the concrete foundations were removed. A soil vapor extraction system was installed to clean soils and the concrete foundation was replaced.
4. Groundwater contamination was identified in a single boring, known as Boring B-12, as shown in the December 22, 1994 AGRA report. This location is also located beneath the former Y-Pay-Mor Dry Cleaning facility.
5. As a result of the residual contamination left underneath the concrete foundation, it will be necessary to conduct semiannual sampling of existing monitoring wells over a three year period, commencing on the date of this document.

Sea-Tac Plaza Limited Partnership makes the following declaration as to limitations, restrictions, and uses to which the Site may be put, and specifies that such declarations shall constitute covenants to run with the land, as provided by law, and shall be binding on all parties and all persons claiming under it, including all current and future owners of any portion of or interest in the Site.

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1

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53012-1424 02:17:00 PM KING COUNTY RECORDS 003 K00 5.00

1. Any activity on the Site that may interfere with the ongoing monitoring of groundwater wells is prohibited. In addition, no groundwater underlying the Site may be taken for domestic purposes.

2. The Owner shall allow authorized representatives of the Department of Ecology, or from any successor agency, the right to enter the Site at reasonable times for the purpose of evaluating compliance with the monitoring of groundwater wells and the remedial action, and to take samples and to inspect records, as provided by law.

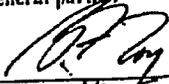
3. The Owner of the Site and the Owner's assigns and successors in interest, reserve the right under WAC 173-340-720 and WAC 173-340-440 to record an instrument which provides that this restrictive covenant shall no longer limit use of the Site or be of any further force and effect. However, such an instrument may be recorded only with the consent of the Department of Ecology, or of any successor agency. Public notice and comment may be sought by the Department of Ecology or its successor agency, prior to the recording of such an instrument.

DATED this 21 day of September, 1995.

**SEA-TAC PLAZA LIMITED PARTNERSHIP**

By: TRI-CENTER ASSOCIATES, a general partner

By: CASETA CORPORATION,  
a general partner

By:   
Printed Name: Bill E. Troy  
Its: Vice President

9510121424

**EXHIBIT A**

That portion of that certain development situated on Tracts A, B, and C and Lot 1 of Evergreen Plaza, as per Plat recorded in Volume 100 of Plats on page 74, records of King County, situate in County of King, State of Washington formerly known as Y-Pay-Mor Dry Cleaners

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003295.02

3

9510121424

Scott Coesman  
444 7th Ave  
Seattle WA 98104



Short Crossman & Burgess P.L.L.C.  
 Attn: Scott M. Missall  
 3000 First Interstate Center  
 999 Third Avenue  
 Seattle, WA 98104-4008

980810-1434 03:28:00 PM KING COUNTY RECORDS 004 THS 11.00

9808101434

Document Title	Declaration of Restrictive Covenant
Reference Number(s) of Related Documents	N/A
Grantor	SeaTac Plaza Corporation
Grantee	Evergreen Plaza, a Planned Unit Development
Legal Description	Space A-6, 2210 S. 320th Street, Federal Way, Washington, located within Lot 2, KCSP No. 1079107, Recording No. 7912260667, being a portion of Tract A, Evergreen Plaza, a Planned Unit Development, Plats Vol. 100, pages 74 and 75
Parcel Number(s)	242320-0050-00

**RESTRICTIVE COVENANT**

**SEATAC PLAZA CORPORATION**

2210 S. 320th Street, Space A-6; Former Y-Pay -Mor Dry Cleaners

This Declaration of Restrictive Covenant is made pursuant to RCW 70.105D.030(1)(f) and (g) and WAC 173-340-440 by SEATAC PLAZA CORPORATION, its successors and assigns.

An independent remedial action (hereafter "Remedial Action") occurred at the property that is the subject of this Restrictive Covenant. The Remedial Action conducted at the property is described in the following documents:

Preliminary Remedial Investigation, by AGRA Earth and Environmental (formerly RZA AGRA), dated November 1992.

Remediation System Installation, by AGRA Earth and Environmental (formerly RZA AGRA), dated October 1993.

Soil Vapor Extraction Remediation System, Performance Monitoring Record, by AGRA Earth and Environmental (formerly RZA AGRA), dated February 7, 1994.

Independent Remedial Action Report, by AGRA Earth and Environmental (formerly RZA AGRA), dated December 22, 1994.

These documents are on file at the Northwest Regional Office of the State of Washington Department of Ecology (hereafter "Ecology").

This restrictive Covenant is required because the Remedial Action resulted in residual concentrations of two contaminants which exceed the Model Toxics Control Act (MTCA) cleanup levels in the soil in two specific locations located under the building foundation.

The undersigned, SEATAC PLAZA CORPORATION, is the fee owner of real property (hereafter "Property") in the County of King, State of Washington, that is subject of this Restrictive Covenant. The Property is legally described as follows:

That property commonly known as Space A-6, 2210 S. 320th Street, Federal Way, Washington, located within Lot 2 as delineated on King County short Plat No. 1079107, recorded under King County Recording No. 7912260667, being a portion of Tract A, Evergreen Plaza, a Planned Unit Development, according to the plat thereof recorded in Volume 100 of Plats, pages 74 and 75, in King County, Washington.

SEATAC PLAZA CORPORATION makes the following declaration as to limitations, restrictions, and uses to which the Property may be put and specifies that such declarations shall constitute covenants to run with the land, as provided by law and shall be binding on all parties and all persons claiming under them, including all current and future owners of any portion of or interest in the Property (hereafter "Owner").

9808101434

**Section 1.** A portion of the Property contains soil contaminated with cis-1,2-dichloroethene and tetrachloroethane, located under the building foundation at confirmation borings CB-4 and CB-5 as shown on Exhibit A. The Owner shall not alter, modify, or remove the existing structure(s) in any manner that may result in the release or exposure to the environment of that contaminated soil or create a new exposure pathway without prior written approval from Ecology.

**Section 2.** Any activity on the Property that may interfere with the integrity of the Remedial Action and continued protection of human health and the environment is prohibited.

**Section 3.** Any activity on the Property that may result in the release or exposure to the environment of a hazardous substance that remains on the Property as part of the Remedial Action, or create a new exposure pathway, is prohibited without prior written approval from Ecology.

**Section 4.** The Owner of the Property must give thirty (30) day advance written notice to Ecology of the Owner's intent to convey any interest in the Property. No conveyance of title, easement, lease, or other interest in the Property shall be consummated by the Owner without adequate and complete provision for continued monitoring, operation, and maintenance of the Remedial Action.

**Section 5.** The Owner must restrict leases to uses and activities consistent with the Restrictive Covenant and notify all lessees of the restrictions on the use of the Property.

**Section 6.** The Owner must notify and obtain approval from Ecology prior to any use of the Property that is inconsistent with the terms of this Restrictive Covenant. Ecology may approve any inconsistent use only after public notice and comment.

**Section 7.** The Owner shall allow authorized representatives of Ecology the right to enter the Property at reasonable times for the purpose of evaluating the Remedial Action; to take samples, to inspect Remedial Actions conducted at the Property, and to inspect records that are related to the Remedial Action.

**Section 8.** The Owner of the Property reserves the right under WAC 173-340-440 to record an instrument that provides that this Restrictive Covenant shall no longer limit use of the Property or be of any further force or effect. However, such an instrument may be recorded only if Ecology, after public notice and opportunity for comment, concurs.

9808101434

DATED this 24<sup>th</sup> day of July, 1998.

SEATAC PLAZA CORPORATION

By *R. J. Gamba*

Its *Vice President*

STATE OF *New York* )  
COUNTY OF *New York* ) ss:

I certify that I know or have satisfactory evidence that *Richard J. Gamba* is the person who appeared before me, and said person acknowledged that he signed this instrument, on oath stated that he was authorized to execute this instrument and acknowledged it as the *Vice President* of SeaTac Plaza Corporation, a corporation, to be the free and voluntary act of such party for the uses and purposes mentioned in this instrument.

DATED: *July 24<sup>th</sup>*, 1998.

9808101434



ANDREA A. MANCINI  
Notary Public, State of New York  
No. 01428043768  
Qualified in New York County  
Commission Expires May 16, 1999

(Use this space for notarial stamp/seal)

*Andrea A. Mancini*  
Print Name: *ANDREA A. MANCINI*  
NOTARY PUBLIC in and for the State of  
*NEW YORK*, residing at *446 Central Park West*  
My Appointment expires: *5-15-99*

**APPENDIX D**  
**REPORT LIMITATIONS AND GUIDELINES FOR USE**

# **APPENDIX D**

## **REPORT LIMITATIONS AND GUIDELINES FOR USE<sup>2</sup>**

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This appendix provides information to help you manage your risks with respect to the use of this report. Please confer with GeoEngineers if you need to know more about how these “Report Limitations and Guidelines for Use” apply to your project or property.

### **Read These Provisions Closely**

It is important to recognize that environmental engineering and geoscience practices (geotechnical engineering, geology and environmental science) are less exact than other engineering and natural science disciplines. GeoEngineers includes these explanatory “limitations” provisions in our reports to help reduce the risk of misunderstandings or unrealistic expectations that lead to disappointments, claims and disputes.

### **Environmental Services Are Performed for Specific Purposes, Persons and Projects**

GeoEngineers has performed this Phase II ESA of the properties at 2200 South 320<sup>th</sup> Street in Federal Way, Washington, King County Tax Parcels 2423200050, 2423200010 and 2423200060 (all contiguous), identified by Sound Transit as Federal Way parcels FL FL358, FL361 and FL363, in general accordance with the scope and limitations of the subcontract between HDR and GeoEngineers dated August 24, 2012, along with Amendments 1 through 9 and Agreement No. RTA/AE 044-12 between HDR and Sound Transit. This report has been prepared for the exclusive use of Sound Transit and their authorized agents. This report is not intended for use by others, and the information contained herein is not applicable to other properties.

GeoEngineers structures its services to meet the specific needs of its clients. For example, an ESA study conducted for a property owner may not fulfill the needs of a prospective purchaser of the same property. Because each environmental study is unique, each environmental report is unique, prepared solely for the specific client and property. Use of this report is not recommended for any purpose or project other than as expressly stated in this report.

### **This Environmental Report is Based on a Unique Set of Project-Specific Factors**

This report has been prepared for the 2200 South 320<sup>th</sup> Street in Federal Way, Washington, King County Tax Parcels 2423200050, 2423200010 and 2423200060 (all contiguous), identified by Sound Transit as Federal Way parcels FL FL358, FL361 and FL363. GeoEngineers considered a

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<sup>2</sup> Developed based on material provided by ASFE, Professional Firms Practicing in the Geosciences; [www.asfe.org](http://www.asfe.org).

number of unique, project-specific factors when establishing the scope of services for this Project. Unless GeoEngineers specifically indicates otherwise, it is important not to rely on this report if it was:

3. not prepared for you,
4. not prepared for your Project,
5. not prepared for the specific site explored, or
6. completed before Project changes were made.

If changes to the Project or property occur after the date of this report, GeoEngineers cannot be responsible for any consequences of such changes in relation to this report unless we have been given the opportunity to review our interpretations and recommendations in the context of such changes. Based on that review, we can provide written modifications or confirmation, as appropriate.

## **Reliance Conditions for Third Parties**

This report was prepared for the exclusive use of Sound Transit and their authorized agents. No other party may rely on the product of our services unless we agree to such reliance in advance and in writing. Within the limitations of the agreed Project scope, schedule and budget, our services have been executed in accordance with our Agreement with the Client and generally accepted environmental practices in this area at the time this report was prepared.

## **Understand That Geotechnical Issues Have Not Been Addressed**

Unless geotechnical engineering was specifically included in our scope of service, this report does not provide any geotechnical findings, conclusions, or recommendations, including but not limited to, the suitability of subsurface materials for construction purposes.

## **Do Not Separate Documentation from the Report**

Environmental reports often include supplemental documentation, such as maps, figures and tables. Do not separate such documentation from the report. Further, do not, and do not permit any other party, to redraw or modify any of the supplemental documentation for incorporation into other professionals' instruments of service.

## **Environmental Regulations Change and Evolve**

Some substances may be present in the vicinity of the subject property in quantities or under conditions that may have led, or may lead, to contamination of the subject property, but are not included in current local, state or federal regulatory definitions of hazardous substances or do not otherwise present current potential liability. GeoEngineers cannot be responsible if the standards for appropriate inquiry, or regulatory definitions of hazardous substances, change or

if more stringent environmental standards are developed in the future.

## **Uncertainty May Remain Even After This Phase II ESA is Completed**

Performance of a Phase II ESA is intended to reduce uncertainty regarding the potential for contamination in connection with a property, but no ESA can wholly eliminate that uncertainty. Our interpretation of subsurface conditions in this study is based on field observations and chemical analytical data from widely spaced sampling locations. It is always possible that contamination exists in areas that were not explored, sampled or analyzed.

## **Information Provided by Others**

GeoEngineers has relied upon certain data or information provided or compiled by others in the performance of our services. Although we use sources that we reasonably believe to be trustworthy, GeoEngineers cannot warrant or guarantee the accuracy or completeness of information provided or compiled by others.

## **Subsurface Conditions Can Change**

This environmental report is based on conditions that existed at the time the study was performed. The findings and conclusions of this report may be affected by the passage of time, by man-made events such as construction on or adjacent to the subject property, by new releases of hazardous substances, new information or technology that become available subsequent to the report date, or by natural events such as floods, earthquakes, slope instability or groundwater fluctuations. Please contact GeoEngineers before applying this report for its intended purpose so that GeoEngineers may evaluate whether changed conditions affect the continued applicability of the report.

## **Soil and Groundwater End Use**

The cleanup levels referenced in this report are site- and situation-specific. The cleanup levels may not be applicable for other properties or for other on-site uses of the affected soil and/or groundwater. Note that hazardous substances may be present in some of the on-site soil and/or groundwater at detectable concentrations that are less than the referenced cleanup levels. GeoEngineers should be contacted prior to the export of soil or groundwater from the subject property or reuse of the affected soil or groundwater on-site to evaluate the potential for associated environmental liabilities. GeoEngineers will not assume responsibility for potential environmental liability arising out of the transfer of soil and/or groundwater from the subject property to another location, or the reuse of such soil and/or groundwater on-site in any instances that we did not recommend, know of, or control.

## **Most Environmental Findings Are Professional Opinions**

Our interpretations of subsurface conditions are based on field observations and chemical analytical data from widely spaced sampling locations at the subject property. Site exploration

identifies subsurface conditions only at those points where subsurface tests are conducted and/or samples are taken. GeoEngineers reviewed field and laboratory data and then applied our professional judgment to render an informed opinion about subsurface conditions throughout the property. Actual subsurface conditions may differ significantly from those indicated in this report. Our report, conclusions and interpretations should not be construed as a warranty of the subsurface conditions.

### **Do Not Redraw the Exploration Logs**

Environmental scientists prepare final exploration logs based upon their interpretation of field logs and laboratory data. To prevent errors or omissions by others, the logs included in an environmental report should never be redrawn for inclusion in other design documents. Only photographic or electronic reproduction that preserves the entire original exploration log is acceptable, but separating logs from the report can create increase the risk of potential misinterpretation.

### **Biological Pollutants**

GeoEngineers' Scope of Work specifically excludes the investigation, detection, prevention or assessment of the presence of Biological Pollutants. Accordingly, this report does not include any interpretations, recommendations, findings or conclusions regarding the detecting, assessing, preventing or abating of Biological Pollutants, and no conclusions or inferences should be drawn regarding Biological Pollutants as they may relate to this Project. The term "Biological Pollutants" includes, but is not limited to, molds, fungi, spores, bacteria and viruses, and/or any of their byproducts.

A Client that desires these specialized services is advised to obtain them from a consultant who offers services in this specialized field.

February 2019

FEDERAL WAY LINK EXTENSION

AE 0044-12 3.7.N

Phase II Environmental Site  
Assessment Addendum  
FL-358 Draft 2

Tax Parcel 2423200050



CENTRAL PUGET SOUND  
REGIONAL TRANSIT AUTHORITY

**Phase II Environmental Site Assessment Addendum  
Sound Transit – Federal Way Link Extension  
Parcel FL-358  
2200 South 320<sup>th</sup> Street  
Federal Way, Washington**

File No. 4082-039-01

February 18, 2019

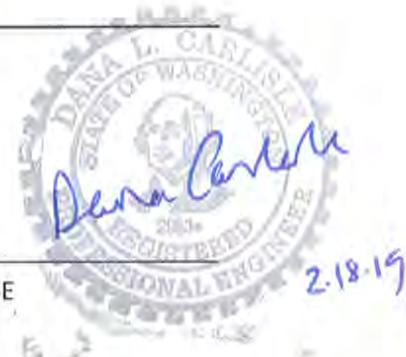
Prepared for:

Sound Transit c/o HDR Engineering  
401 South Jackson Street  
Seattle, Washington 98104-2826  
Attention: Mark Menard

Prepared by:

GeoEngineers, Inc.  
1101 South Fawcett Avenue, Suite 200  
Tacoma, Washington 98402  
253.383.4940

  
\_\_\_\_\_  
Ian D. Young, LG  
Geologist

  
\_\_\_\_\_  
Dana L. Carlisle, PE  
Principal

IDY:DLC:ch

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## Acronyms and Abbreviations

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ASTM	ASTM International
CID	Contained-In Determination
CLARC	Cleanup Levels and Risk Calculation
CSM	Conceptual Site Model
DCE	dichloroethene
Ecology	Washington State Department of Ecology
EPA	United States Environmental Protection Agency
ESA	environmental site assessment
FWLE	Federal Way Link Extension
MTCA	Model Toxics Control Act
PCE	tetrachloroethylene
PID	photoionization detector
ppm	parts per million
TCE	trichloroethylene
VOC	volatile organic compound
WAC	Washington Administrative Code

# 1.0 Introduction

---

This report presents the results of the Phase II Environmental Site Assessment (ESA) Addendum for the former Y Pay Mor Dry Cleaner located on Federal Way Link Extension (FWLE) Parcel FL-358 (subject property, or Property). Parcel FL-358 is currently owned by Winson at Federal Way, LLC (Winson); the address of the subject property is 2200 South 320<sup>th</sup> Street, Federal Way, Washington (King County Parcel 2423200050). Parcel FL-358 is developed with the Sea-Tac Plaza shopping center, where the Y Pay Mor Dry Cleaner had been a tenant in the shopping center building in the 1980s and early 1990s. Y Pay Mor Dry Cleaner is a Model Toxics Control Act (MTCA) cleanup Site identified by the Washington State Department of Ecology (Ecology) (Cleanup Site ID 3180 – <https://fortress.wa.gov/ecy/gsp/Sitepage.aspx?csid=3180>).

This additional investigation was completed as an addendum to the December 2017 Phase II ESA (Federal Way Link Extension, AE 0044-12 WP 3.S, Phase II Environmental Site Assessment FL358, FL361 and FL363, Tax Parcels 2423200050, 2423200010 and 2423200060). The purpose of the additional investigation was to evaluate the presence and lateral extent of tetrachloroethylene (PCE) and associated chemicals beneath the building on FL-358.

The subject property is shown relative to surrounding physical features on the Vicinity Map, Figure 1. The general layout of Parcel FL-358 and surrounding properties is shown on Figure 2, the FWLE proposed construction plan for FL-358 and adjacent parcels is shown on Figure 3. Figure 4 shows the former Y Pay Mor Dry Cleaner tenant space and Figure 3 presents a detailed layout of the Phase II ESA addendum study area.

Sound Transit plans to acquire parcel FL-358 in full, with demolition to existing structures based on current design information for the FWLE project (HDR, provided in March 2018). Sound Transit's proposed construction and development on the Property includes an expansion to the Federal Way Transit Center and parking garage, new roads and utilities, a large stormwater vault, and an elevated light rail track (columns and guideway structure). Proposed construction and development activities by Sound Transit could change as project design is refined.

The results of this Phase II ESA Addendum will be used by Sound Transit as part of their evaluation of potential environmental liabilities associated with ownership of the Property and future design and construction of the FWLE. This report has been prepared for the exclusive use of Sound Transit, their agents and project design team. Because this environmental report is not intended for use by others, no one else should rely on this report without first conferring with GeoEngineers.

Throughout the report, references to “the FWLE”, the “project”, the “proposed project”, “the alignment,” or the “light rail corridor” refer to the alignment selected by the Sound Transit Board in January 2017 after publication of the FEIS.

## 1.1 Authorization

This report was prepared under the terms of the subcontract between HDR and GeoEngineers, Inc. (GeoEngineers) dated August 24, 2012, along with Amendments 1 through 12. The subcontract authorizes GeoEngineers to provide environmental services for the Sound Transit Federal Way Link Extension in accordance with Agreement No. RTA/AE 044-12 between HDR and Sound Transit.

## 1.2 Site History and Summary of Prior Environmental Studies

GeoEngineers completed a Phase I ESA for FL-358 in March 2017 and a Phase II ESA in December 2017. FL-358 is developed with the Sea-Tac Plaza shopping center and parking built in 1979, of which the former Y Pay Mor Dry Cleaner occupied a tenant space at the far east end of the shopping center, currently occupied by a restaurant and laser tag game facility. As noted above, the former Y Pay Mor Dry Cleaner was identified by Ecology as a MTCA cleanup Site. The following is a brief summary of information in the Ecology's file for the Y Pay Mor Dry Cleaner Site:

- Y Pay Mor Dry Cleaner was a tenant in the shopping center on FL-358 between approximately the late 1980s and 1994. A spill of PCE occurred inside the dry cleaner tenant space in 1991. Site assessment completed in 1992 included limited sampling of soil and groundwater beneath and surrounding the dry cleaner space. PCE was detected in a groundwater sample obtained from beneath the dry cleaner space (boring B-12).
- A soil vapor extraction (SVE) remediation system operated beneath the dry cleaner space in 1993 and 1994. SVE is an in-situ treatment method for soil in the unsaturated zone; SVE methods do not directly treat groundwater. Documents available at Ecology indicate the SVE treatment area was beneath the building footprint at and next to the dry cleaner space, approximately as shown in Figure 4.
- Post-remediation compliance sampling included soil sampling from borings inside the dry cleaner in 1994 and groundwater sampling at monitoring wells outside the building footprint in 1994 and 1997. PCE was detected at a concentration greater than the MTCA Method A cleanup level in one of the 1994 soil samples from inside the dry cleaner space (boring CB-4). PCE and its degradation compounds trichloroethylene (TCE), cis-1,2-dichloroethene (cis-1,2-DCE) and vinyl chloride were detected at concentrations less than the MTCA cleanup levels in the groundwater samples from 1994 and 1997.
- Ecology issued an interim No Further Action (NFA) determination for Y Pay Mor Dry Cleaner dated June 9, 1995, conditional on the recording of a restrictive covenant in 1995. The 1995 covenant documents that residual concentrations of solvents remained in soil and groundwater at levels exceeding MTCA Method A cleanup levels. Ecology issued a final NFA dated October 23, 1998, conditioned on a second restrictive covenant recorded in August 1998. The 1998 covenant outlines the conditions required to preserve Ecology's NFA determination for the dry cleaner Site. Both the 1995 and 1998 covenants identify that the former Y-Pay-Mor Dry Cleaner facility" was located in "Space A-6" of the Sea-Tac Plaza shopping center. Based on comparison on maps and dimensions of the existing building, Space A-6 corresponds to the current locations of a restaurant and a part of

the adjacent laser tag game facility (see Figure 5). Neither covenant delineates the boundaries of the Y Pay Mor Dry Cleaner MTCA Site.

- In 2018, Ecology completed a Periodic Review for the Y Pay Mor Dry Cleaner Site as required by MTCA. Ecology determined that based on existing data available at the time of the 1998 NFA and Restrictive Covenant, additional action is not necessary and the restrictive covenant is still protective because the overlying building and pavement structure/materials act as a cap preventing infiltration and direct contact.

During the December 2017 Phase II ESA, GeoEngineers conducted an assessment in the exterior vicinity of the former Y Pay Mor Dry Cleaner by completing six exploration borings, four of which were completed as monitoring wells. Soil samples were obtained from all six explorations and selected samples were submitted for chemical analysis. Groundwater samples were obtained from the four newly installed monitoring wells and from one previously installed monitoring well (FL358-MW-1, FL358-MW-2, FL358-MW-3 and FL358-MW-4, and Y Pay Mor-MW3). Volatile organic compounds (VOCs) were also analyzed in downgradient groundwater samples obtained from the south/southwest margins of FL-358 to confirm the presence/absence of dry cleaner-related solvents in groundwater at these downgradient locations on the parcel. No explorations were completed inside the shopping center building in connection with the 2017 study. The reader is referred to GeoEngineers' Phase II ESA for FL-358, FL-361 and FL-363 for a detailed summary of conditions on these parcels.

The key findings of the 2017 Phase II ESA were as follows.

### **1.3 Soil**

The concentration of PCE in one soil sample from a boring (FL358-B1) completed outside the building directly north of the dry cleaner space was greater than the MTCA Method A cleanup level. Detected concentrations of PCE in the remaining Phase II ESA soil samples, and detected TCE and cis-1,2-DCE concentrations in the soil samples tested, were less than the corresponding MTCA cleanup levels. Vinyl chloride was not detected in the Phase II ESA soil samples tested. Prior studies and the recent Phase II ESA did not fully delineate the lateral and vertical extent of residual PCE in soil at concentrations greater than the MTCA Method A cleanup level.

### **1.4 Groundwater**

Five monitoring wells in close proximity to the former dry cleaner (four monitoring wells installed by GeoEngineers, FL358-MW-1, FL358-MW-2, FL358-MW-3 and FL358-MW-4, and one previously installed monitoring well, Y Pay Mor-MW3) were sampled and analyzed for the dry-cleaning solvent PCE and breakdown products TCE, cis-1,2-DCE and vinyl chloride in October 2017. PCE, TCE and cis-1,2-DCE were detected at concentrations less than the corresponding MTCA cleanup levels in groundwater from one well located cross-gradient (northeast) of the former dry cleaner. One VOC, cis-1,2-DCE, was detected at concentrations less than the MTCA cleanup level in two additional groundwater samples from downgradient wells. The October 2017 result for cis-1,2-DCE downgradient of the former dry cleaner was approximately an order of magnitude lower than the cis-1,2-DCE concentrations reported

in 1997. PCE, TCE, cis-1,2-DCE and vinyl chloride were not detected in the downgradient groundwater samples obtained in October 2017 from the south margin of FL-358 and on contiguous parcel FL-363.

Although dry cleaning solvents were not detected in the Phase II ESA groundwater samples at concentrations greater than MTCA cleanup levels, groundwater directly beneath the former dry cleaner space was not assessed during the 2017 study, and was previously documented to exceed the MTCA Method A cleanup level for PCE based on 1992 groundwater sample at B-12.

#### **1.4.1 Phase II ESA Data Gaps**

Several site characterization data gaps including those listed below were identified relative to the former Y Pay Mor Dry Cleaner Site based on our 2017 study for Sound Transit.

- The lateral and vertical extent of residual PCE and related compounds in soil and groundwater at concentrations exceeding MTCA cleanup levels;
- Hydrogeologic conditions relative to potential shallow and deeper aquifer systems;
- The potential for contaminant migration via preferential pathways such as underground utility corridors or fill; and
- The potential for indoor air vapor intrusion for dry cleaning VOCs relative to the existing shopping center building.

### **1.5 Purpose and Scope of Services**

The purpose of the Phase II ESA Addendum is to evaluate the lateral extent of PCE and associated breakdown products to be present beneath the building as indicated in borings B-12 and CB-4. A passive soil vapor survey was conducted to support the delineation of residual impacts and development of a more complete site characterization. GeoEngineers' scope of services consisted of the following:

1. Performed a site reconnaissance of the Property.
2. Developed a health and safety plan for use by our field representatives in accordance with WAC 296-24.
3. Coordinated the marking of subsurface utilities at the exploration locations by notifying the one-call locate service for underground utilities in public rights-of-way and a private utility locate service for underground utilities on private property, for both interior and exterior sampling locations.
4. Installed eighteen sub-slab passive soil vapor samplers in and around the former Y Pay Mor Dry Cleaner tenant space to quantify the relative magnitude of dry cleaner-related VOCs in soil vapor. Following a 9-day sampler exposure period, GeoEngineers field staff returned to collect the sub-slab samplers and restore the sampling locations.
5. Submitted the soil vapor samplers for chemical mass analysis of the following: PCE, TCE and cis-1,2-DCE by the AGI Screening method, which utilizes a modification of US Environmental Protection

Agency (EPA) Method 8260 for external standard calibration.

6. Evaluated the soil vapor chemical mass analytical data relative to previous sampling locations to evaluate current subsurface conditions related to residual chlorinated solvents beneath the building slab.

## 2.0 Site Description

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### 2.1 Location and Property Description

The subject property is located in an area of predominantly commercial development. The two tenant spaces of interest are located at the east end of the shopping center, and are occupied by the Western Garden restaurant and Laser Quest game facility, which together occupy the footprint of the former Y Pay Mor Dry Cleaner.

The location is shown relative to surrounding physical features in Figure 1. The current layout of the subject property and surrounding properties are shown in Figure 2.

### 2.2 Site Reconnaissance

GeoEngineers personnel visited the subject property on November 13 and 14, 2018 to complete a survey of sub-floor and buried utilities with a private utility locator prior to installation of passive soil vapor samplers. The Western Garden restaurant and Laser Quest tenant spaces are located at the east end of the shopping center. The Western Garden tenant space occupies the majority of the footprint of former Y Pay Mor Dry Cleaner, and is composed of a dining area and bar at the front of the space and a kitchen, food storage and restrooms at the rear. Laser Quest is located at the tenant space west-adjacent to the former Y Pay Mor Dry Cleaner, though the large game arena at the rear of the business occupies the northern portion of the former dry cleaner (Figure 5). The game facility is composed of a lobby with electronic games and private party rooms, storage for electronic game devices, and a warehouse-like arena with ramps, platforms and obstacles for play.

We did not identify visual evidence of current use or past releases of hazardous substances to the ground surface or pavement in or near the restaurant or game facility during our visit.

## **3.0 Subsurface Explorations**

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### **3.1 General**

The Phase II ESA Addendum explorations included the installation of eighteen (18) sub-slab passive soil vapor samplers in and around the former Y Pay Mor Dry Cleaner tenant space. Subject property use, subsurface conditions and historical analytical results were evaluated to develop the sampling and analysis plan followed for the Phase II ESA Addendum (Federal Way Link Extension, AE 0044-12 3.7.N, Soil Vapor Sampling Work Plan - Phase II ESA Data Gaps Investigation Draft 2, Federal Way Link Parcel FL-358, King County Tax Parcel 2423200050).

Sample locations were selected relative to the footprint of the former dry cleaner, and historical groundwater sample location B-12 and confirmation soil sample location CB-4 where chlorinated solvents had been reported at concentrations greater than MTCA cleanup levels.

### **3.2 Contaminants of Concern**

Potential contaminants for the Phase II ESA Addendum screening included PCE and its degradation products, of which PCE, TCE and cis-1,2-DCE had been identified in soil and groundwater beneath the former dry cleaner space.

The chemical analytical data for samples obtained during this investigation were evaluated to determine locations beneath the building slab where potential contaminants may be encountered during Sound Transit construction activities.

### **3.3 Sampling Methodology**

Sub-slab passive vapor samplers SS-1 through SS-18 were installed to depths of 2.1 to 2.7 feet below the floor grade using hand coring and drilling methods. Four samplers were installed in the dining area and kitchen of the Western Garden Restaurant; eleven samplers were installed in the adjacent lobby and play arena of the Laser Quest game facility; three samplers were installed in the exterior pavement at the loading dock immediately north of the Laser Quest arena.

Installation of the sub-slab samplers was completed on November 27 and 28, 2018 by GeoEngineers' field technicians. GeoEngineers field staff returned on December 6 and 7, 2018 to collect the samplers following a 9-day exposure period and restore the sampling locations. Methods and the field exploration program are presented in Appendix A. Approximate sampler survey installation locations are shown on Figure 4.

## 4.0 Analytical Testing Results

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Eighteen (18) sub-slab passive soil vapor samplers were collected from sample locations at the subject property following a 9-day sampler exposure period. Following retrieval, the passive vapor samplers were submitted to Amplified Geochemical Imaging (AGI) in Newark, Delaware for chemical analysis and graphical interpretation. The method for chemical analysis followed the AGI Screening method, which utilizes a modification of US Environmental Protection Agency (EPA) Method 8260 for external standard calibration, and reports results graphically by mass in micrograms ( $\mu\text{g}$ ).

The soil vapor chemical analytical mass results and distribution contour maps are shown in Figures 6 through 8 for PCE, TCE and cis-1,2-DCE; laboratory-prepared contour distributions maps are provided in Appendix B.

### 4.1.1.1 PCE

PCE was confirmed to be present beneath the building slab in an area centered on sample location SS9. This location is situated north and west of historical sample locations B-12 and CB-4, and immediately west of the approximate footprint of the former Y Pay Mor Dry Cleaner tenant space. The presence of PCE is delineated to the southeast by sample locations SS1 and SS2, and to the north by sample locations SS16, SS17 and SS18, where PCE was not detected.

### 4.1.1.2 TCE

TCE was confirmed to be present beneath the building slab in an area centered on sample locations SS3 and SS9. The presence of TCE is delineated to the south by sample locations SS2 and SS6, and to the north by sample locations SS16, SS17 and SS18, where TCE was not detected.

### 4.1.1.3 Cis-1,2-DCE

Cis-1,2-DCE was confirmed to be present beneath the building slab in an area centered on sample locations SS3 and SS9, similar to TCE. The presence of cis-1,2-DCE is delineated to the south by sample locations SS2 and SS6, and to the north by sample locations SS13, SS15, SS16 and SS17 where cis-1,2-DCE was not detected.

### 4.1.1.4 Trans-1,2-DCE

Trans-1,2-DCE was confirmed to be present beneath the building slab by isolated detections in sample locations SS3 and SS9, and SS18.

### 4.1.1.5 Vinyl Chloride

Vinyl chloride was not detected soil vapor collected at any sample location.

## 5.0 Conclusions and Recommendations

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The purpose of the Phase II ESA Addendum is to evaluate the presence and lateral extent of PCE and related breakdown compounds from the former dry cleaner release. Passive soil vapor samples were collected from eighteen sub-slab locations in and around the former Y Pay Mor Dry Cleaner tenant space to quantify the magnitude of dry cleaner-related VOCs present in soil vapor by location.

Chemical distribution contour maps generated from the laboratory analysis of the passive soil vapor samples confirmed the residual presence of PCE, TCE and cis-1,2-DCE beneath the building slab (SS3 and SS9), centered on the approximate vicinity of historical concentrations of PCE that exceeded MTCA Method A cleanup levels in both groundwater and soil (B-12 and CB-4, respectively). The presence of these three chlorinated solvents were generally delineated at the north and south boundaries of the building footprint as shown by decreasing mass or non-detections of these chemicals.

### 5.1 Sound Transit Acquisition and Future Construction Recommendations

Based on current design information for the FWLE project, Sound Transit plans to acquire parcel FL-358 in full, with demolition of the existing structures planned. Sound Transit's proposed construction and development on the Property includes an expansion to the Federal Way Transit Center and parking garage, new roads and utilities, a large stormwater vault, and elevated light rail track. Proposed construction and development activities by Sound Transit could change as project design is refined.

The results of this soil vapor survey report provide a screening method to evaluate the mass of contaminants present in sub-slab soil vapor by location. This screening method is indicative of the presence of these contaminants and potential source areas, and does not report actual concentrations.

A remedial cost estimate for MTCA cleanup is recommended for Sound Transit's acquisition, based on historical soil and groundwater exceedances for PCE at B-12 (groundwater) and CB-4 (soil) and confirmation of the residual presence of PCE and related compounds beneath the building slab. Remedial options and costs will depend on assumptions made about delineation of the Site and the conceptual site model (CSM), as well as Property use at the time of cleanup.

The findings of the Phase II ESA Addendum indicate that a cost estimate for construction purposes is recommended for FL-358 because contaminated and impacted soil and groundwater may be encountered in future Sound Transit excavation areas. Further assessment of soil and groundwater to determine concentrations of contaminants and their lateral and vertical extent in the northeast portion of FL-358 is warranted to determine the impacts that

construction may have on the conditions of the restrictive covenant and soil and groundwater that may be encountered during construction. Supplemental assessment could include soil and groundwater samples from exploratory borings where PCE and related compounds were identified in soil vapor at elevated levels and analytical testing to assess whether excavated soil will qualify for a contained-in determination (CID) from Ecology (see below).

We recommend a contaminated and impacted soil and groundwater handling plan be prepared prior to construction activities that outlines soil and groundwater segregation, handling, stockpiling and end use/disposal with potential follow-up chemical analytical testing for waste disposal characterization as needed. Based on the regulatory history and current analytical findings, soil and groundwater at the subject property contain chlorinated solvents resulting from release(s) associated with the former dry cleaner operations. Spent chlorinated solvent waste from dry cleaning would be considered an F002-listed Dangerous Waste under the State Dangerous Waste Regulations (Chapter 173-303 WAC). Therefore soil and groundwater with detections of PCE, or its degradation products TCE and/or cis-1,2-DCE, that may be excavated in the future would likely also classify as F002-listed Dangerous Waste necessitating special handling, transport, tracking and disposal. Soil from the saturated zone within the area where groundwater has detectable concentrations of dry cleaning solvents, may also be classified as dangerous waste. Based on our experience at similar sites and the soil chemical analytical data from previous studies, it is likely that there were will areas where excavated soil will meet Ecology’s criteria for a CID.

The table below summarizes the Phase II ESA (and Addendum) findings relative to Sound Transit’s proposed acquisition and future construction.

Potential Sources of Contamination Identified	Potential Source Within Acquisition Area	Potential Source Within Construction Area	Impacted Soil and Groundwater Present	Contaminated Soil and Groundwater Present	Remedial Cost Estimate Necessary for Construction	Remedial Cost Estimate Necessary for Acquisition
On-Site	Yes	Yes	Yes Soil vapor survey confirms presence of PCE, TCE and cis-1,2-DCE beneath building slab	Yes Historical soil and groundwater data identify PCE at concentrations greater than MTCA CUL beneath building slab	Yes	Yes

## **6.0 Limitations and Guidelines for Use**

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These Limitations provide information to help you manage your risks with respect to the use of this report. Some clients, design professionals and contractors may not recognize that the geoscience practices (geotechnical engineering, geology and environmental science) are far less exact than other engineering and natural science disciplines. This lack of understanding can create unrealistic expectations that could lead to disappointments, claims and disputes. GeoEngineers includes these explanatory “limitations” provisions in our reports to help reduce such risks. Please confer with GeoEngineers if you are unclear how these “Limitations and Guidelines for Use” apply to your project or site.

This Phase II ESA Addendum has been prepared, in general accordance with the scope and limitations of the subcontract between HDR and GeoEngineers dated August 24, 2012, along with Amendments 1 through 12 and Agreement No. RTA/AE 044-12 between HDR and Sound Transit.

This report has been prepared for the exclusive use of Sound Transit and their agents. This report is not intended for use by others, and the information contained herein is not applicable to other properties. No other party may rely on the product of our services unless we agree in advance to such reliance in writing. This is to provide our firm with reasonable protection against open-ended liability claims by third parties with whom there would otherwise be no contractual limits to their actions. Within the limitations of scope, schedule and budget, our services have been executed in accordance with our Agreement with the Client and generally accepted environmental practices in this area at the time this report was prepared.

Within the limitations of scope, schedule and budget, our services have been executed in accordance with generally accepted environmental science practices in this area at the time this report was prepared. The conclusions and opinions presented in this report are based on our professional knowledge, judgment and experience. No warranty, express or implied, applies to this report.

Any electronic form, facsimile or hard copy of the original document (email, text, table and/or figure), if provided, and any attachments should be considered a copy of the original document. The original document is stored by GeoEngineers, Inc. and will serve as the official document of record.

Please refer to the appendix titled “Report Limitations and Guidelines for Use” for additional information pertaining to use of this report.

## 7.0 References

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AGRA Earth & Environmental, 1997. Letter to The Norman Company, Sea-Tac Plaza, Biannual Sampling of Monitoring Well MW-3, Former Y-Pay-Mor Dry Cleaners, Federal Way, Washington, February 28, 1997.

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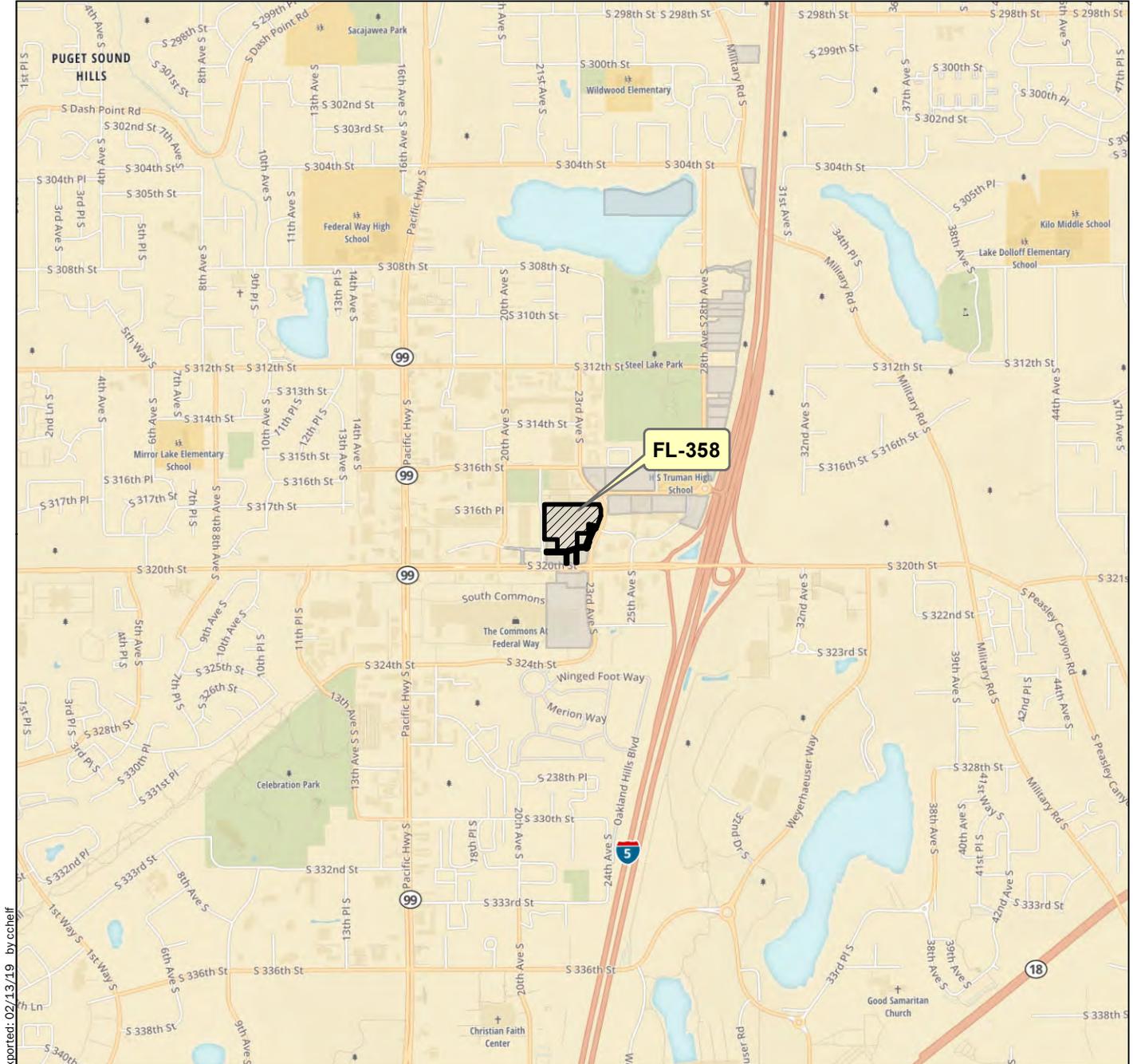
Washington State Department of Ecology. 1998. Letter to Mr. Rich J. Gambia, Citibank Global Asset Management, Re: Independent Remedial Action Sea-Tac Plaza/Former Y-Pay-Mor Dry Cleaner, Space A-6, 2210 S. 320<sup>th</sup> Street, Federal Way, Washington, October 22, 1998.

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<https://fortress.wa.gov/ecy/clarc/CLARCHome.aspx>.

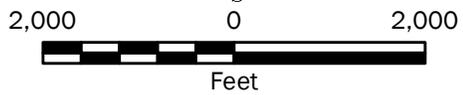


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**Legend**

- Subject Property
- Project Parcel



**Notes:**

1. The locations of all features shown are approximate.
2. This drawing is for information purposes. It is intended to assist in showing features discussed in an attached document. GeoEngineers, Inc. cannot guarantee the accuracy and content of electronic files. The master file is stored by GeoEngineers, Inc. and will serve as the official record of this communication.

Data Source: Mapbox Open Street Map, 2017

Projection: NAD 1983 UTM Zone 10N

<b>Vicinity Map FL-358 (With FL-361 and FL-363)</b>	
Phase II ESA Addendum Federal Way Link Extension Federal Way, Washington	
	<b>Figure 1</b>



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**Legend**

- |  |   |  |  |  |  |  |                                 |
|--|---|--|--|--|--|--|---------------------------------|
|  | GeoEngineers Phase II ESA Monitoring Well               |  | Monitoring Well by Others Not Sampled or Located   |  | Boundary Mapped Historic Drainage Area (c. 1949) |  | Fee Take                        |
|  | GeoEngineers Phase II ESA Soil Boring                   |  | Monitoring Well by Others Sampled for Phase II ESA |  | Subject Property                                 |  | Permanent and Slope Easement    |
|  | GeoEngineers Phase II ESA Boring with Grab Water Sample |  | Extraction Well Location                           |  | Parcel   |  | Temporary Construction Easement |

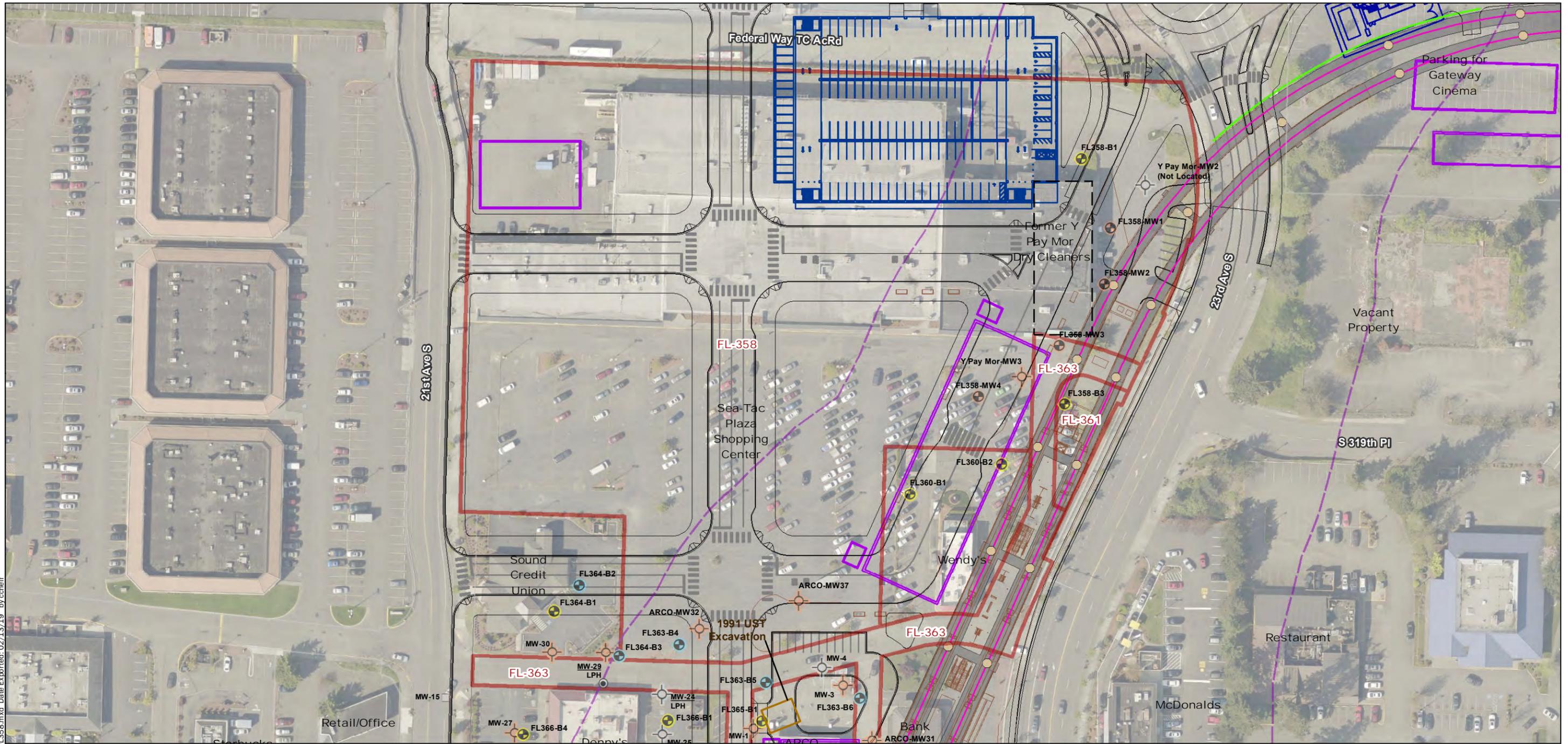
**Notes:**

1. Based on current design information for the FWLE project (HDR, provided in October 2017)  
 2. The locations of all features shown are approximate. 3. This drawing is for information purposes. It is intended to assist in showing features discussed in an attached document. GeoEngineers, Inc. cannot guarantee the accuracy and content of electronic files. The master file is stored by GeoEngineers, Inc. and will serve as the official record of this communication.  
 Data Source: Aerial and road names from King County 2015.

Parcel #: 2423200050, 2423200010, 2423200060  
 Address: 2200 S 320TH ST  
 City: Federal Way  
 Owner: WINSON AT FEDERAL WAY, LLC.  
 Current Use: Sea-Tac Plaza, Vacant(Commercial), Right of Way/Utility, Road



<b>Site Plan</b> <b>FL-358 (With FL-361 and FL-363)</b>	
Phase II ESA Addendum Federal Way Link Extension Federal Way, Washington	
	<b>Figure 2</b>



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**Legend**

- GeoEngineers Phase II ESA Monitoring Well
- GeoEngineers Phase II ESA Soil Boring
- GeoEngineers Phase II ESA Boring with Grab Water Sample
- Monitoring Well by Others Not Sampled or Located
- Monitoring Well by Others Sampled for Phase II ESA
- Extraction Well Location
- Boundary Mapped Historic Drainage Area (c. 1949)
- Subject Property
- Parcel

- Fee Take
- Permanent and Slope Easement
- Temporary Construction Easement

**Planned Construction Features**

- Column
- Track
- Parking Structure
- Road/Parking/Sidewalk
- Station (line)
- Stormwater Ponds and Vaults
- Wall
- TPSS - Traction
- Striping (Pavement Markings)
- Structure



**Notes:**

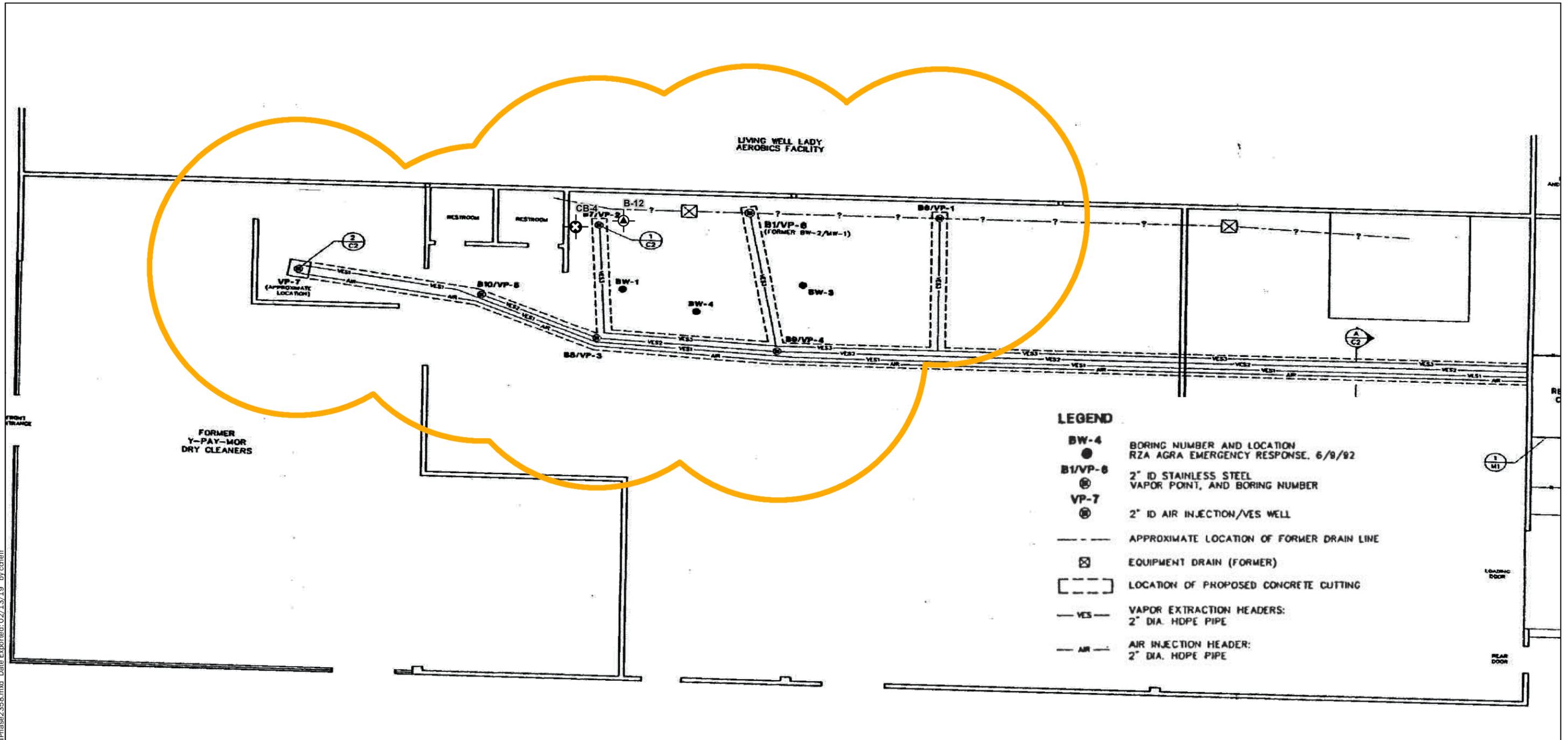
1. Based on current design information for the FWLE project (HDR, provided in October 2017)  
 2. The locations of all features shown are approximate. 3. This drawing is for information purposes. It is intended to assist in showing features discussed in an attached document. GeoEngineers, Inc. cannot guarantee the accuracy and content of electronic files. The master file is stored by GeoEngineers, Inc. and will serve as the official record of this communication.  
 Data Source: Aerial and road names from King County 2015.

Parcel #: 2423200050, 2423200010, 2423200060  
 Address: 2200 S 320TH ST  
 City: Federal Way  
 Owner: WINSON AT FEDERAL WAY, LLC.  
 Current Use: Sea-Tac Plaza, Vacant(Commercial), Right of Way/Utility, Road

**Proposed Construction Plan**  
**FL-358 (With FL-361 and FL-363)**

Phase II ESA Addendum  
 Federal Way Link Extension  
 Federal Way, Washington

**Figure 3**



**LEGEND**

- BW-4** ● BORING NUMBER AND LOCATION  
RZA AGRA EMERGENCY RESPONSE, 6/8/92
- B1/VP-6** ⊙ 2" ID STAINLESS STEEL  
VAPOR POINT, AND BORING NUMBER
- VP-7** ⊙ 2" ID AIR INJECTION/VES WELL
- APPROXIMATE LOCATION OF FORMER DRAIN LINE
- ⊗ EQUIPMENT DRAIN (FORMER)
- LOCATION OF PROPOSED CONCRETE CUTTING
- VES --- VAPOR EXTRACTION HEADERS:  
2" DIA. HDPE PIPE
- AIR --- AIR INJECTION HEADER:  
2" DIA. HDPE PIPE

**Legend**

- Approximate SVE Treatment Area
- B-12** ⊙ Cased Boring (AGRA, 1992)
- CB-4** ⊙ Confirmation Boring (AGRA, 1994)

**Notes:**

1. Figure based on RZA AGRA Preliminary Remedial Investigation, November 1992, Sheet C1, Site Plan with System Layout.
2. Approximate area of treatment based on RZA AGRA Preliminary Remedial Investigation, November 1992, Vapor Extraction Feasibility Test, Appendix F.
3. RZA AGRA SVE system startup records state that system operated at 25 inches H2O vacuum at source.
4. Effective radius of influence is assumed to be the distance from an extraction wellhead in feet at which a vacuum of at least 0.1 inches H2O is maintained.
5. The locations of all features shown are approximate.
6. This drawing is for information purposes. It is intended to assist in showing features discussed in an attached document. GeoEngineers, Inc. cannot guarantee the accuracy and content of electronic files. The master file is stored by GeoEngineers, Inc. and will serve as the official record of this communication.

Data Source:



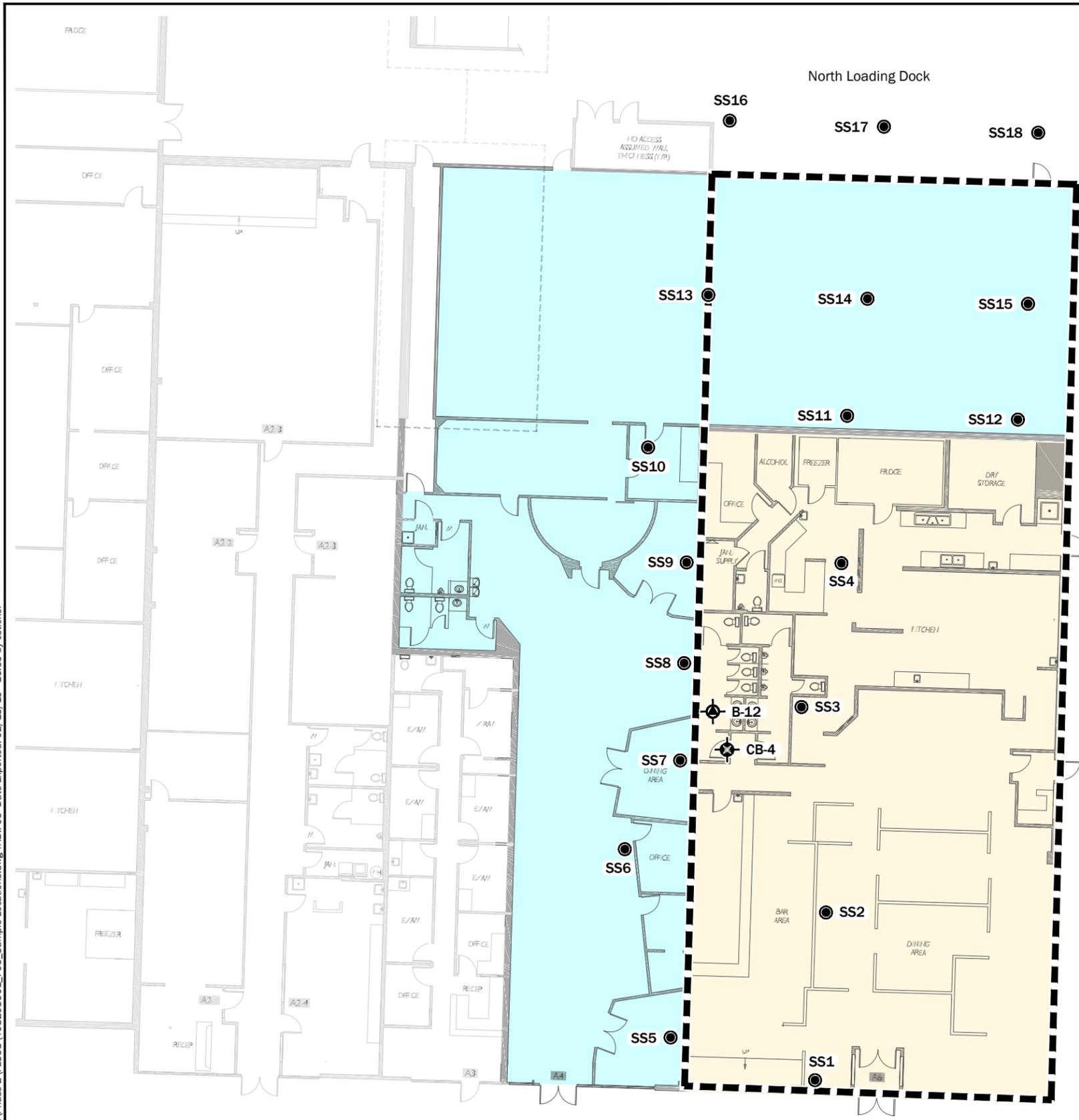
**Y Pay Mor Dry Cleaner  
SVE System Layout with Approximate  
Treatment Area**

Phase II ESA Addendum  
Federal Way Link Extension  
Federal Way, Washington


Figure 4

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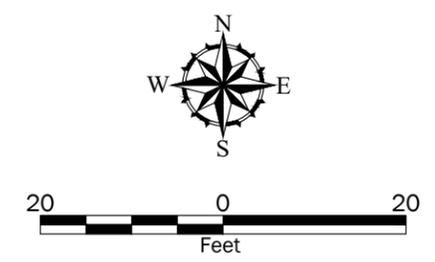
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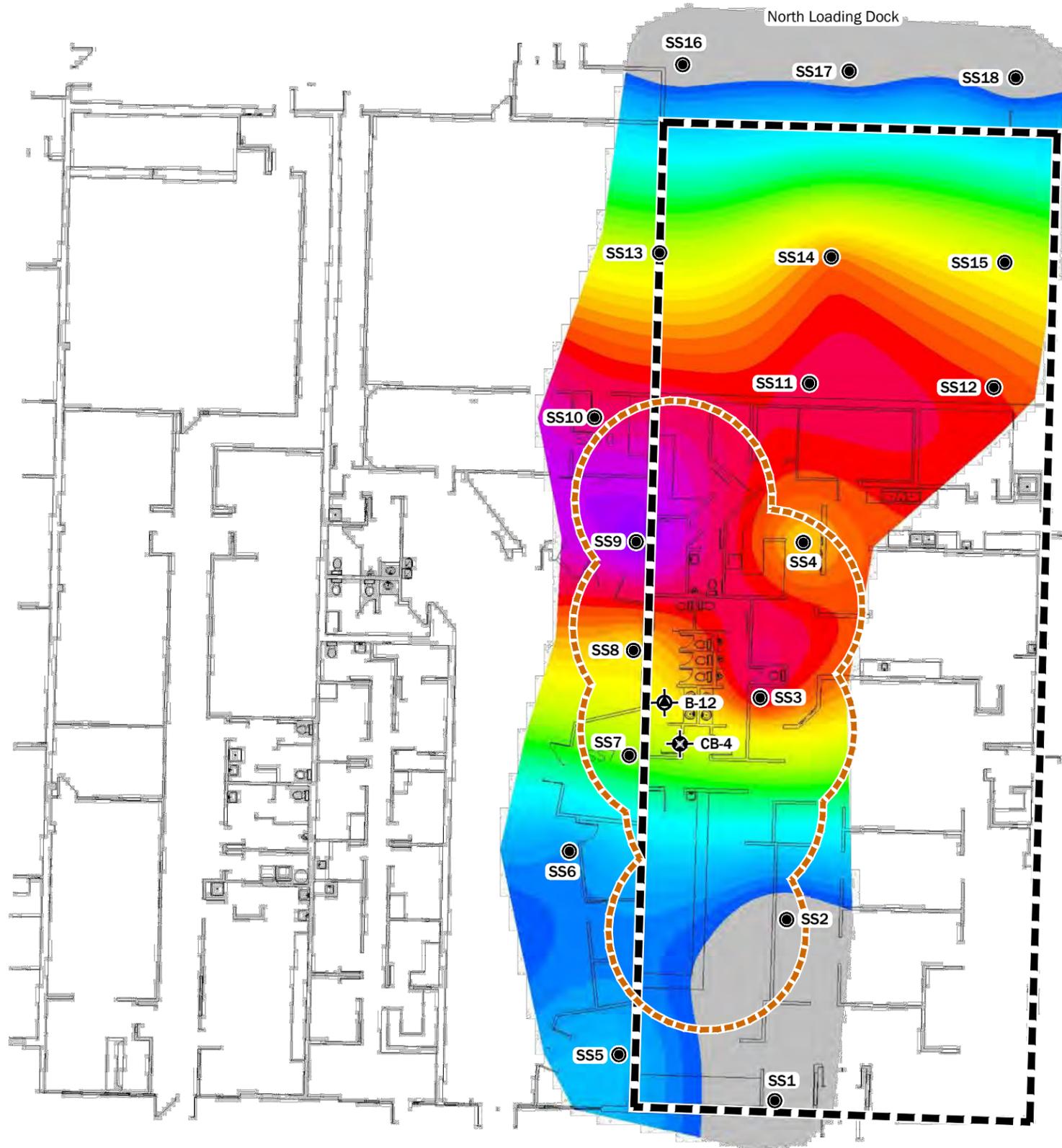
- Legend**
-  Approximate Former Footprint of Y Pay Mor Dry Cleaner
  -  Current Footprint of Laser Quest Tenant Space
  -  Current Footprint of Western Garden Restaurant Tenant Space
  -  SS1 ● Location of Sub-Slab Sample Location
  -  B-12 ⊕ Cased Boring (AGRA, 1992)
  -  CB-4 ⊕ Confirmation Boring (AGRA, 1994)

- Notes:**
1. The locations of all features shown are approximate.
  2. This drawing is for information purposes. It is intended to assist in showing features discussed in an attached document. GeoEngineers, Inc. cannot guarantee the accuracy and content of electronic files. The master file is stored by GeoEngineers, Inc. and will serve as the official record of this communication.

Data Source: Floor Plan 1, Retail Building - 2120 South 320th Street, Federal Way, WA 98003 by 2D Floorplans dated September 2014.

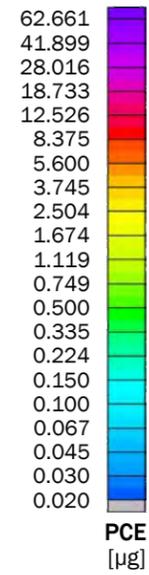


<b>Soil Vapor Sample Locations FL-358</b>	
Phase II ESA Addendum Federal Way Link Extension Federal Way, Washington	
	<b>Figure 5</b>



**Legend**

-  Approximate Former Footprint of Y Pay Mor Dry Cleaner
-  Approximate Treatment Area
-  SS1 ● Location of Sub-Slab Sample Location
-  B-12 ● Cased Boring (AGRA, 1992)
-  CB-4 ● Confirmation Boring (AGRA, 1994)

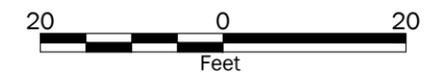


**Notes:**

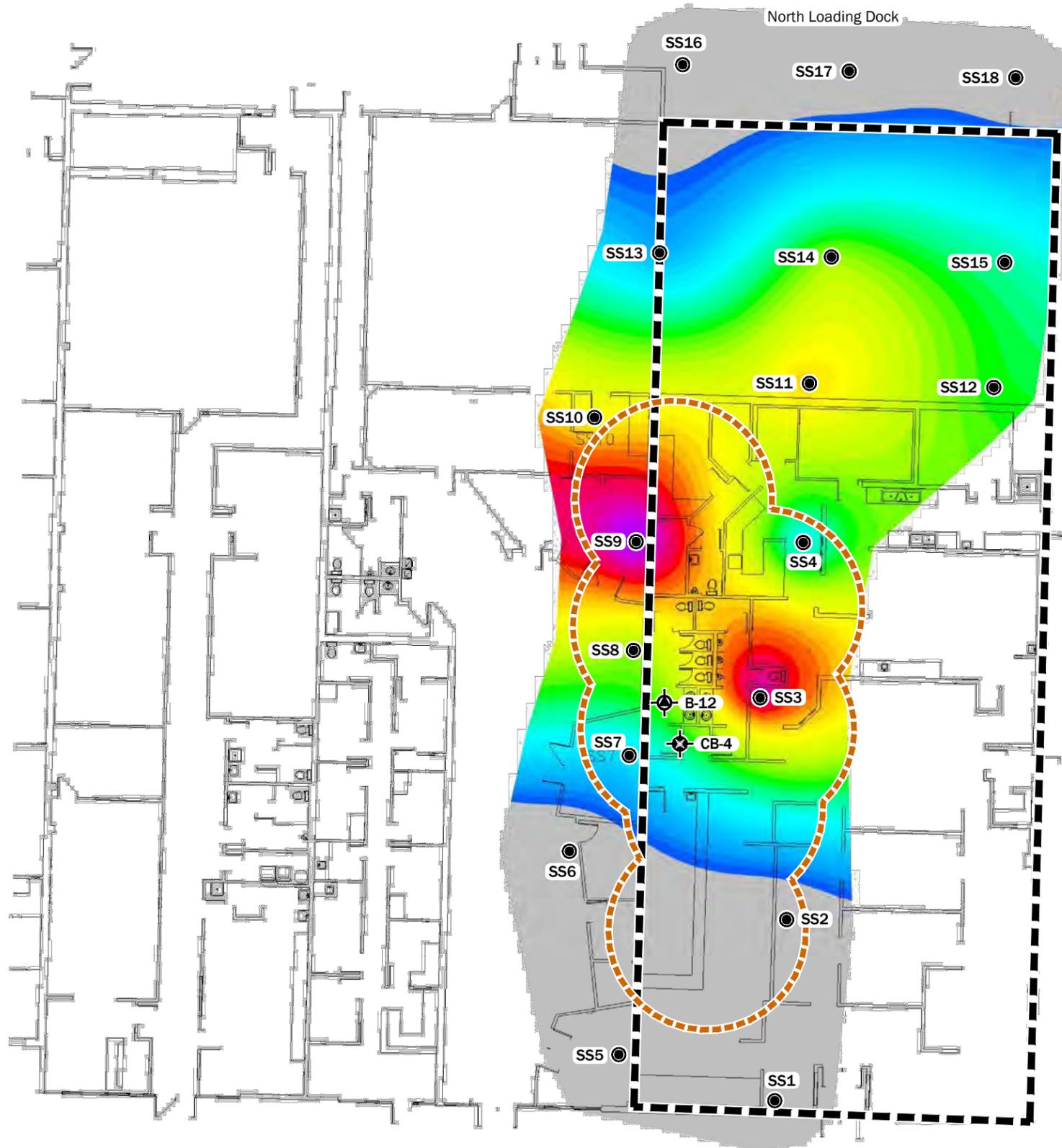
1. Mass indicates amount of analyte accumulated on passive sampler during a 9-day exposure period.
2. The locations of all features shown are approximate.
3. This drawing is for information purposes. It is intended to assist in showing features discussed in an attached document. GeoEngineers, Inc. cannot guarantee the accuracy and content of electronic files. The master file is stored by GeoEngineers, Inc. and will serve as the official record of this communication.

**Data Source:**

- Floor Plan 1, Retail Building - 2120 South 320th Street, Federal Way, WA 98003 by 2D Floorplans dated September 2014.
- PCE concentration plume from Amplified Geochemical Imaging (AGI) dated 1/4/2019.

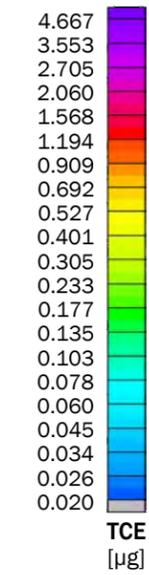


<b>Distribution of PCE in Sub-Slab Soil Vapor by Mass, FL-358</b>	
Phase II ESA Addendum Federal Way Link Extension Federal Way, Washington	
	<b>Figure 6</b>



**Legend**

-  Approximate Former Footprint of Y Pay Mor Dry Cleaner
-  Approximate Treatment Area
-  SS1 ● Location of Sub-Slab Sample Location
-  B-12 ⊕ Cased Boring (AGRA, 1992)
-  CB-4 ⊛ Confirmation Boring (AGRA, 1994)

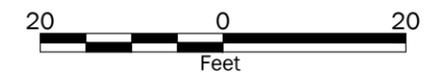


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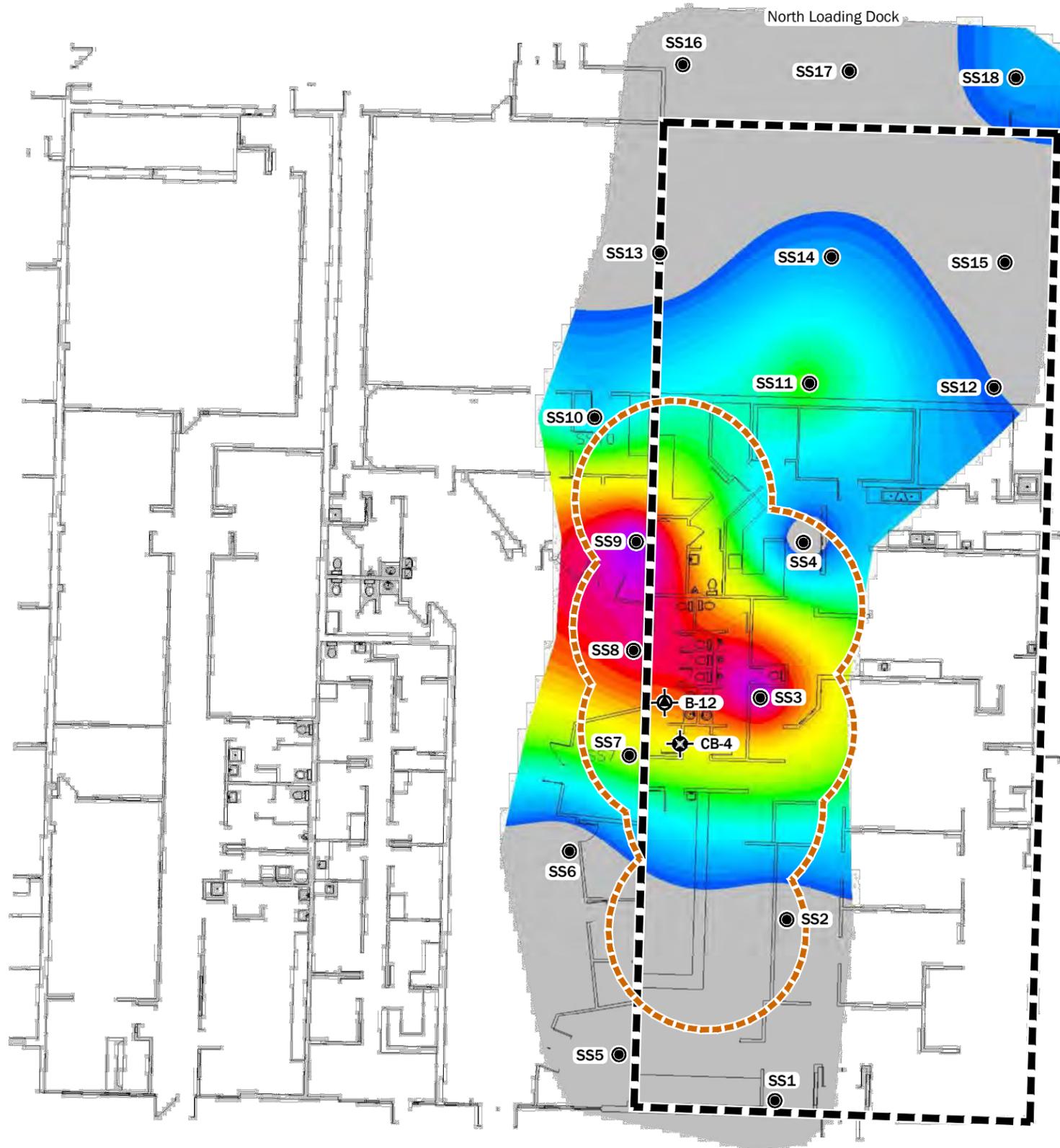
1. Mass indicates amount of analyte accumulated on passive sampler during a 9-day exposure period.
2. The locations of all features shown are approximate.
3. This drawing is for information purposes. It is intended to assist in showing features discussed in an attached document. GeoEngineers, Inc. cannot guarantee the accuracy and content of electronic files. The master file is stored by GeoEngineers, Inc. and will serve as the official record of this communication.

**Data Source:**

- Floor Plan 1, Retail Building - 2120 South 320th Street, Federal Way, WA 98003 by 2D Floorplans dated September 2014.
- PCE concentration plume from Amplified Geochemical Imaging (AGI) dated 1/4/2019.

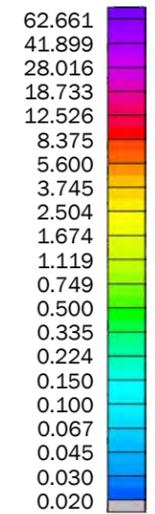


<b>Distribution of TCE in Sub-Slab Soil Vapor by Mass, FL-358</b>	
Phase II ESA Addendum Federal Way Link Extension Federal Way, Washington	
	<b>Figure 7</b>



**Legend**

-  Approximate Former Footprint of Y Pay Mor Dry Cleaner
-  Approximate Treatment Area
-  SS1 ● Location of Sub-Slab Sample Location
-  B-12 ● Cased Boring (AGRA, 1992)
-  CB-4 ● Confirmation Boring (AGRA, 1994)



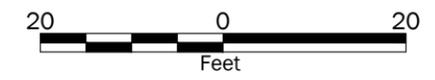
Sum cis- anPCE ns-1,2-DCE  
[µg]

**Notes:**

1. Mass indicates amount of analyte accumulated on passive sampler during a 9-day exposure period.
2. The locations of all features shown are approximate.
3. This drawing is for information purposes. It is intended to assist in showing features discussed in an attached document. GeoEngineers, Inc. cannot guarantee the accuracy and content of electronic files. The master file is stored by GeoEngineers, Inc. and will serve as the official record of this communication.

**Data Source:**

- Floor Plan 1, Retail Building - 2120 South 320th Street, Federal Way, WA 98003 by 2D Floorplans dated September 2014.
- PCE concentration plume from Amplified Geochemical Imaging (AGI) dated 1/4/2019.



<b>Distribution of Cis-1,2-DCE in Sub-Slab Soil Vapor by Mass, FL-358</b>	
Phase II ESA Addendum Federal Way Link Extension Federal Way, Washington	
	<b>Figure 8</b>

**APPENDIX A**  
**FIELD EXPLORATION PROGRAM**

# APPENDIX A

## FIELD PROCEDURES

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### Underground Utility Locate

Prior to investigation activities, an underground utility locate was conducted in the areas of the proposed boring locations to identify subsurface utilities and/or potential underground physical hazards. The underground utility check consisted of contacting a local utility alert service (one-call) and hiring a private utility locating service.

### Soil Vapor Sampler Installation

The passive sub-slab soil vapor samplers were installed at confirmed locations, in general accordance with the instructions and specifications provided by the vendor, which are included in this appendix. A 1-inch diameter hole was drilled through the building slab (or asphalt concrete in the loading dock area north of the building) at each sample location using a masonry drill to allow installation of the sampler media. Sample locations were temporarily sealed using a bentonite seal and waterproof tape to secure the sampler and prevent accidental tampering. Per vendor instructions, sub-slab soil vapor samplers remained in place undisturbed for a period of 9 days.

GeoEngineers' field staff documented sampling information in a dedicated project field log and the laboratory chain-of-custody (COC) including sample name, sample location, sample installation/collection date and time, requested analytical methods and sampler name. Sampler locations were documented by photograph both prior to and following installation/collection.

Following completion of the scheduled sampling duration, GeoEngineers field staff returned to collect the sub-slab samplers per the instructions and specifications provided by the vendor. GeoEngineers field staff restored explorations to generally match surrounding grade, and submitted to the vendor laboratory for analytical testing and graphical interpretation. Selected photographs taken during the Phase II ESA Addendum sampling are presented as Figures A-1 through A-2.

### Field Screening of Sample Locations

During installation of the passive soil vapor samplers, the borings were screened in the field for evidence of contamination using vapor headspace screening with a photo-ionization detector (PID). PID readings are recorded in the installation and retrieval log included in this appendix.

Headspace vapor screening involves placing the probe of a PID at the newly-completed boring in the building slab, and the instrument measures the concentration of combustible vapor in the air removed from the sample headspace. The PID measures concentrations in ppm (parts per million) and is calibrated to isobutylene. The PID is designed to quantify combustible gas

and organic vapor concentrations up to 2,500 ppm. A lower threshold of significance of 1 ppm was used in this application. Field screening results are site-specific and vary with soil type, soil moisture content, temperature and type of contaminant.



Photograph 1 – Passive sub-slab soil vapor sample location SS4, installed in kitchen of the Western Garden restaurant. Masonry drill and shroud at right of sample location.



Photograph 2 – Detail of 1-inch hole advanced in slab at sample location SS4 in preparation of sampler installation.

<b>FL-358 Site Photographs</b> <b>November-December 2018</b>	
Phase II Environmental Site Assessment Addendum Federal Way Link Extension Federal Way, Washington	
	<b>Figure A-1</b>



Photograph 3 – Completed passive sub-slab soil vapor sampler installation at location SS1 at the cashier station in the Western Garden restaurant. Field instrument (PID) visible surrounding location.



Photograph 4 –Detail of sample location SS1 showing cork in center of slab penetration, surrounded by bentonite seal and waterproof plastic sheet and tape.

004082-039-01 Date: 1/25/2019

<b>FL-358 Site Photographs</b> <b>November-December 2018</b>	
Phase II Environmental Site Assessment Addendum Federal Way Link Extension Federal Way, Washington	
	<b>Figure A-2</b>

**APPENDIX B**  
**AMPLIFIED GEOCHEMICAL IMAGING LLC MAPPING REPORT**

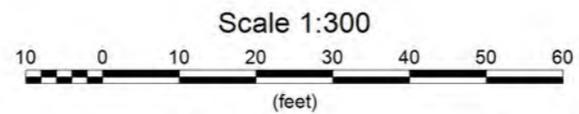
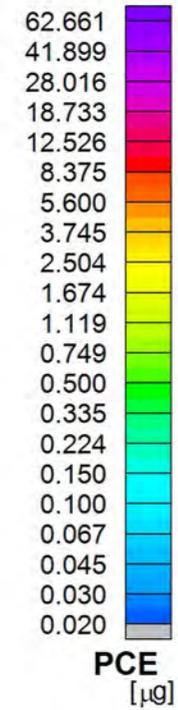
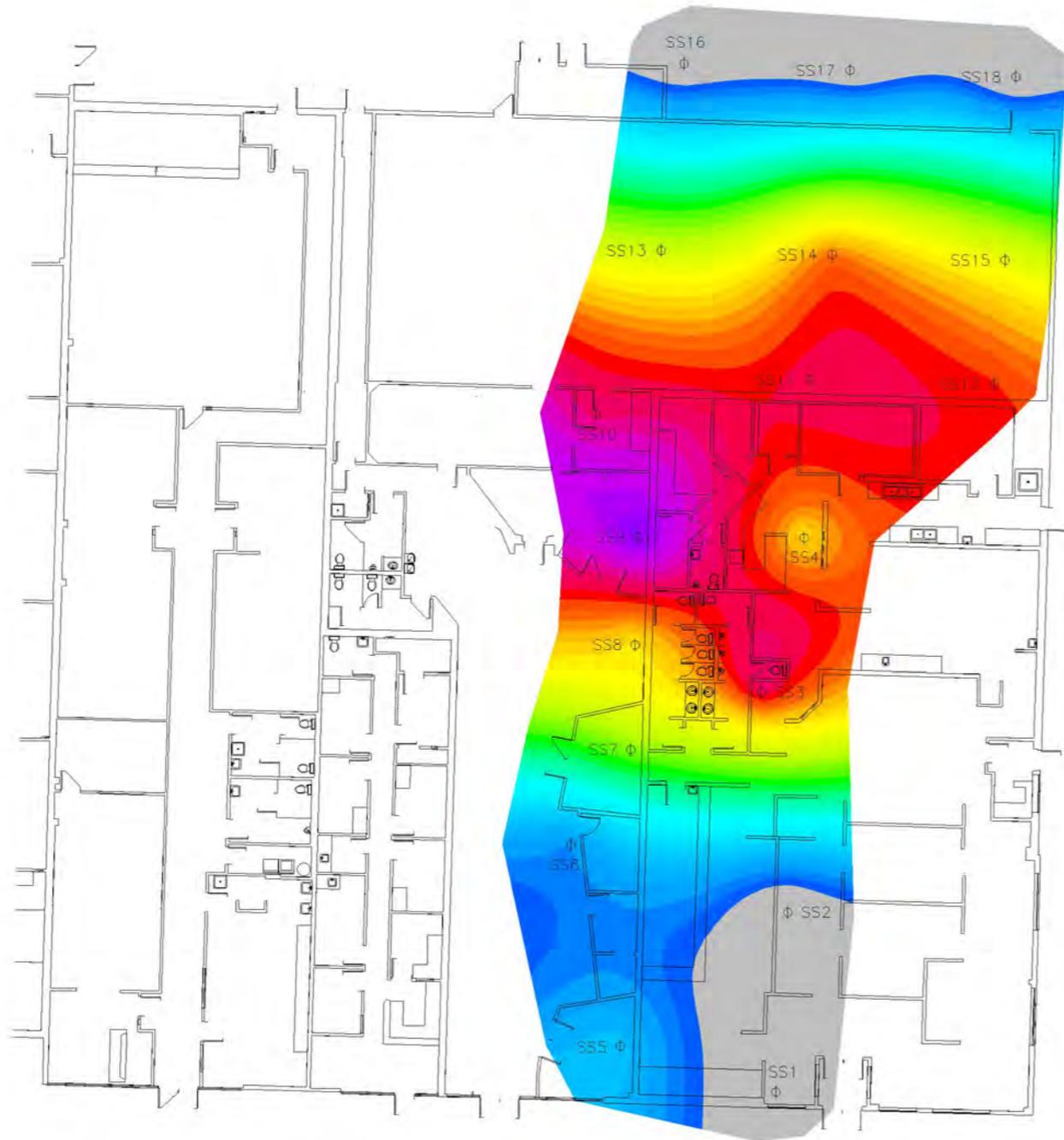
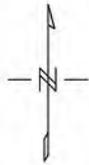
# **APPENDIX B**

## **AMPLIFIED GEOCHEMICAL IMAGING LLC MAPPING REPORT**

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### **Analytical Methods**

Chain-of-custody procedures were followed during the transport of the soil vapor samplers to the analytical laboratory. The analytical results, in graphical survey format are included in this appendix. The analytical results are also summarized in the text of this report.

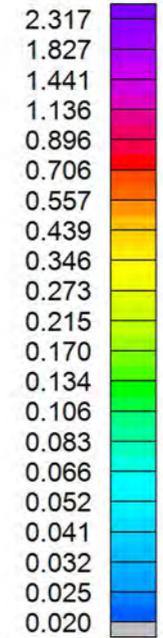
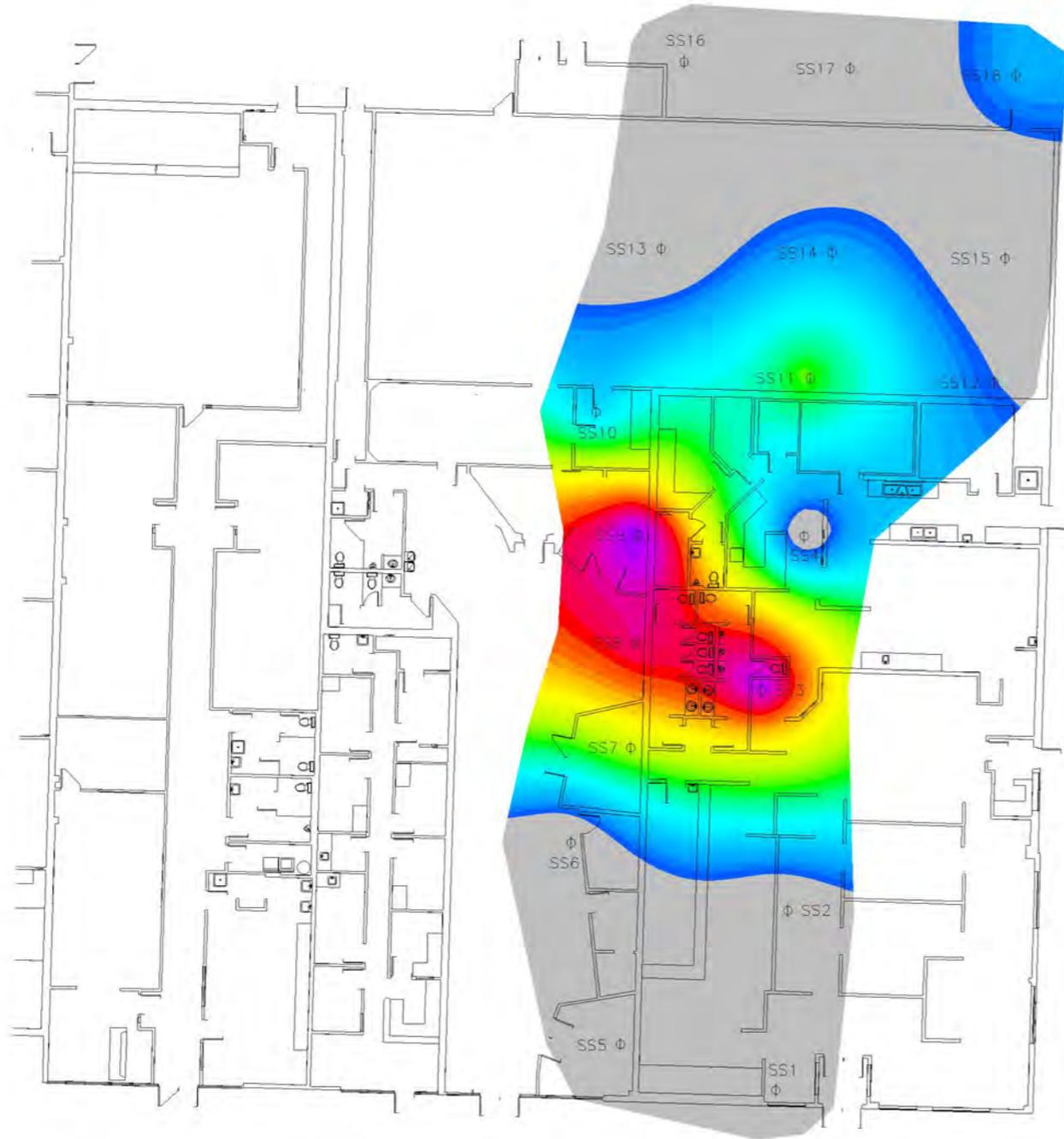
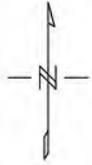


210 EXECUTIVE DRIVE, SUITE 1  
 NEWARK, DELAWARE 19702-3335 USA  
 PHONE: +1-302-266-2428  
 FAX: +1-302-266-2429  
 WWW.AGISURVEYS.NET

GeoEngineers, Inc.  
 FL-358 Y PAY MORE  
 Tetrachloroethene

DATE DRAWN: Jan 4, 2019	DRAWN BY: RF	ORIG. CAD: FL-358 Sample Locations.dwg
REV. DATE:	REV. #:	PROJECT NUMBER: 02071

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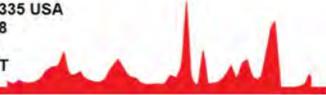


Sum cis- and trans-1,2-DCE  
[µg]

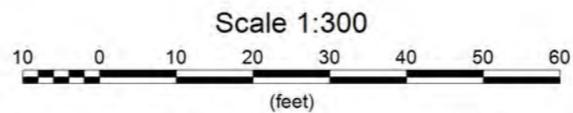


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**GeoEngineers, Inc.**  
**FL-358 Y PAY MORE**  
**Sum of cis- and trans-1,2-Dichloroethene**



DATE DRAWN: Jan 4, 2019

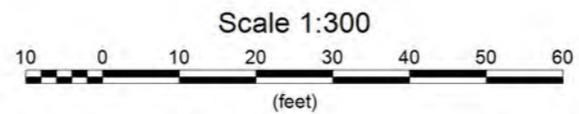
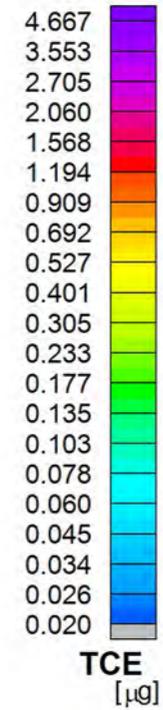
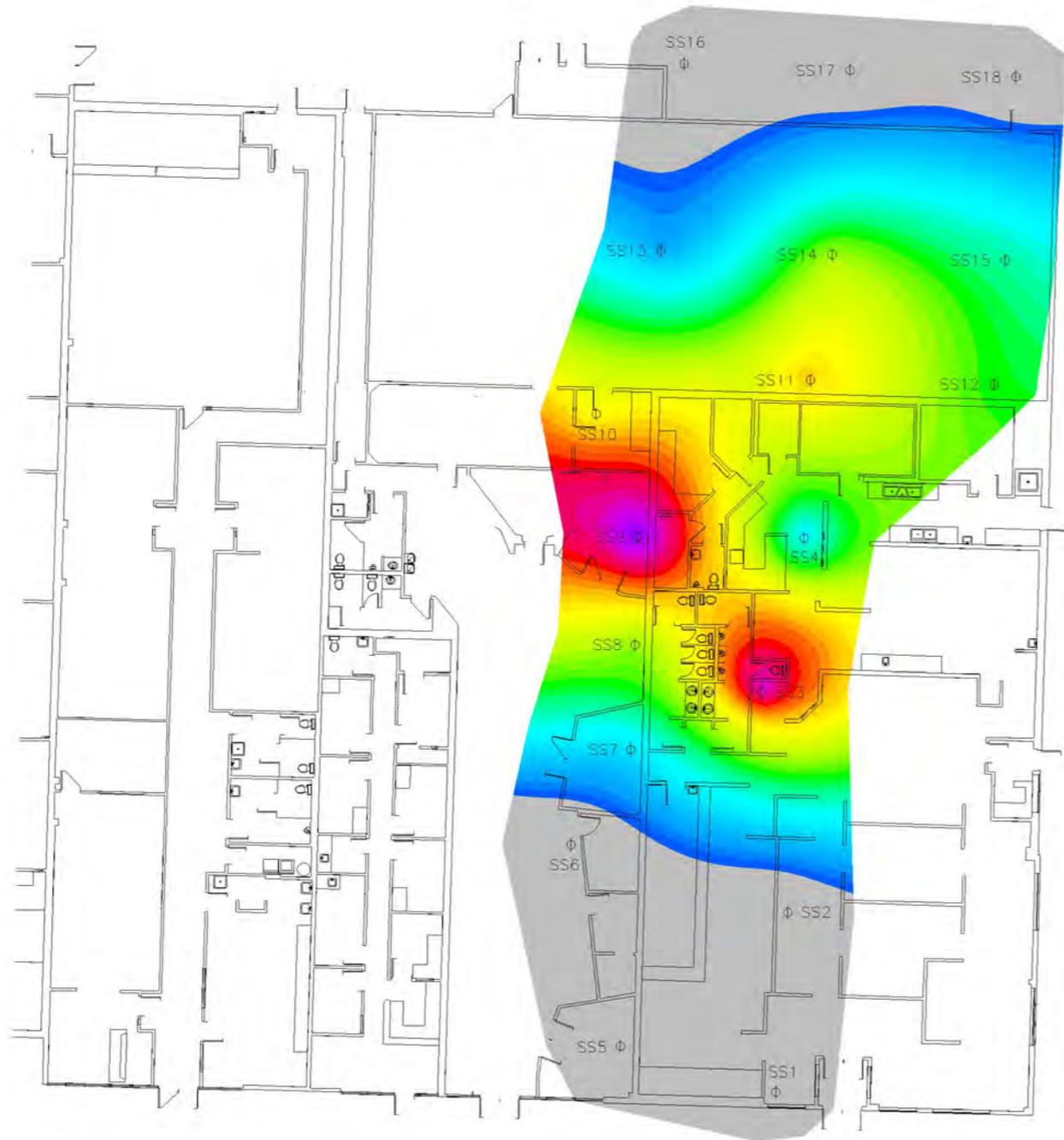
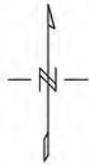
DRAWN BY: RF

ORIG. CAD: FL-358 Sample Locations.dwg

REV. DATE:

REV. #:

PROJECT NUMBER: 02071



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**GeoEngineers, Inc.**  
**FL-358 Y PAY MORE**  
**Trichloroethene**

DATE DRAWN: Jan 4, 2019	DRAWN BY: RF	ORIG. CAD: FL-358 Sample Locations.dwg
REV. DATE:	REV. #:	PROJECT NUMBER: 02071

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**APPENDIX C**  
**REPORT LIMITATIONS AND GUIDELINES FOR USE**

# **APPENDIX C**

## **REPORT LIMITATIONS AND GUIDELINES FOR USE<sup>1</sup>**

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This appendix provides information to help you manage your risks with respect to the use of this report. Please confer with GeoEngineers if you need to know more about how these “Report Limitations and Guidelines for Use” apply to your project or property.

### **Read These Provisions Closely**

It is important to recognize that environmental engineering and geoscience practices (geotechnical engineering, geology and environmental science) are less exact than other engineering and natural science disciplines. GeoEngineers includes these explanatory “limitations” provisions in our reports to help reduce the risk of misunderstandings or unrealistic expectations that lead to disappointments, claims and disputes.

### **Environmental Services Are Performed for Specific Purposes, Persons and Projects**

GeoEngineers has performed this Phase II ESA Addendum for the property at 2200 South 320<sup>th</sup> Street, Federal Way, Washington, King County Parcel 2423200050, identified by Sound Transit as FWLE parcel FL-358, in general accordance with the scope and limitations of the subcontract between HDR and GeoEngineers dated August 24, 2012, along with Amendments 1 through 12 and Agreement No. RTA/AE 044-12 between HDR and Sound Transit. This report has been prepared for the exclusive use of Sound Transit and their authorized agents. This report is not intended for use by others, and the information contained herein is not applicable to other properties.

GeoEngineers structures its services to meet the specific needs of its clients. For example, an ESA study conducted for a property owner may not fulfill the needs of a prospective purchaser of the same property. Because each environmental study is unique, each environmental report is unique, prepared solely for the specific client and property. Use of this report is not recommended for any purpose or project other than as expressly stated in this report.

### **This Environmental Report is Based on a Unique Set of Project-Specific Factors**

This report has been prepared for the property at 2200 South 320<sup>th</sup> Street, Federal Way, Washington, King County Parcel 2423200050, FWLE parcel FL-358. GeoEngineers considered a number of unique, project-specific factors when establishing the scope of services for this Project. Unless GeoEngineers specifically indicates otherwise, it is important not to rely on this

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<sup>1</sup> Developed based on material provided by ASFE, Professional Firms Practicing in the Geosciences; [www.asfe.org](http://www.asfe.org).

report if it was:

- not prepared for you,
- not prepared for your Project,
- not prepared for the specific site explored, or
- completed before Project changes were made.

If changes to the Project or property occur after the date of this report, GeoEngineers cannot be responsible for any consequences of such changes in relation to this report unless we have been given the opportunity to review our interpretations and recommendations in the context of such changes. Based on that review, we can provide written modifications or confirmation, as appropriate.

### **Reliance Conditions for Third Parties**

This report was prepared for the exclusive use of Sound Transit and their authorized agents. No other party may rely on the product of our services unless we agree to such reliance in advance and in writing. Within the limitations of the agreed Project scope, schedule and budget, our services have been executed in accordance with our Agreement with the Client and generally accepted environmental practices in this area at the time this report was prepared.

### **Understand That Geotechnical Issues Have Not Been Addressed**

Unless geotechnical engineering was specifically included in our scope of service, this report does not provide any geotechnical findings, conclusions, or recommendations, including but not limited to, the suitability of subsurface materials for construction purposes.

### **Do Not Separate Documentation from the Report**

Environmental reports often include supplemental documentation, such as maps, figures and tables. Do not separate such documentation from the report. Further, do not, and do not permit any other party, to redraw or modify any of the supplemental documentation for incorporation into other professionals' instruments of service.

### **Environmental Regulations Change and Evolve**

Some substances may be present in the vicinity of the subject property in quantities or under conditions that may have led, or may lead, to contamination of the subject property, but are not included in current local, state or federal regulatory definitions of hazardous substances or do not otherwise present current potential liability. GeoEngineers cannot be responsible if the standards for appropriate inquiry, or regulatory definitions of hazardous substances, change or if more stringent environmental standards are developed in the future.

## **Uncertainty May Remain Even After This Phase II ESA is Completed**

Performance of a Phase II ESA is intended to reduce uncertainty regarding the potential for contamination in connection with a property, but no ESA can wholly eliminate that uncertainty. Our interpretation of subsurface conditions in this study is based on field observations and chemical analytical data from widely spaced sampling locations. It is always possible that contamination exists in areas that were not explored, sampled or analyzed.

## **Information Provided by Others**

GeoEngineers has relied upon certain data or information provided or compiled by others in the performance of our services. Although we use sources that we reasonably believe to be trustworthy, GeoEngineers cannot warrant or guarantee the accuracy or completeness of information provided or compiled by others.

## **Subsurface Conditions Can Change**

This environmental report is based on conditions that existed at the time the study was performed. The findings and conclusions of this report may be affected by the passage of time, by man-made events such as construction on or adjacent to the subject property, by new releases of hazardous substances, new information or technology that become available subsequent to the report date, or by natural events such as floods, earthquakes, slope instability or groundwater fluctuations. Please contact GeoEngineers before applying this report for its intended purpose so that GeoEngineers may evaluate whether changed conditions affect the continued applicability of the report.

## **Soil and Groundwater End Use**

The cleanup levels referenced in this report are site- and situation-specific. The cleanup levels may not be applicable for other properties or for other on-site uses of the affected soil and/or groundwater. Note that hazardous substances may be present in some of the on-site soil and/or groundwater at detectable concentrations that are less than the referenced cleanup levels. GeoEngineers should be contacted prior to the export of soil or groundwater from the subject property or reuse of the affected soil or groundwater on-site to evaluate the potential for associated environmental liabilities. GeoEngineers will not assume responsibility for potential environmental liability arising out of the transfer of soil and/or groundwater from the subject property to another location, or the reuse of such soil and/or groundwater on-site in any instances that we did not recommend, know of, or control.

## **Most Environmental Findings Are Professional Opinions**

Our interpretations of subsurface conditions are based on field observations and chemical analytical data from widely spaced sampling locations at the subject property. Site exploration identifies subsurface conditions only at those points where subsurface tests are conducted

and/or samples are taken. GeoEngineers reviewed field and laboratory data and then applied our professional judgment to render an informed opinion about subsurface conditions throughout the property. Actual subsurface conditions may differ significantly from those indicated in this report. Our report, conclusions and interpretations should not be construed as a warranty of the subsurface conditions.

## **Biological Pollutants**

GeoEngineers' Scope of Work specifically excludes the investigation, detection, prevention or assessment of the presence of Biological Pollutants. Accordingly, this report does not include any interpretations, recommendations, findings or conclusions regarding the detecting, assessing, preventing or abating of Biological Pollutants, and no conclusions or inferences should be drawn regarding Biological Pollutants as they may relate to this Project. The term "Biological Pollutants" includes, but is not limited to, molds, fungi, spores, bacteria and viruses, and/or any of their byproducts.

A Client that desires these specialized services is advised to obtain them from a consultant who offers services in this specialized field.

**APPENDIX C**  
**Previous Boring Logs**

Shannon & Wilson uses a soil identification system modified from the Unified Soil Classification System (USCS). Elements of the USCS and other definitions are provided on this and the following page. Soil descriptions are based on visual-manual procedures (ASTM D2488) and laboratory testing procedures (ASTM D2487), if performed.

### Structure<sup>1</sup>

Interbedded	Alternating layers of varying material or color with layers at least 1/4-inch-thick; singular: bed.
Laminated	Alternating layers of varying material or color with layers less than 1/4-inch-thick; singular: lamination.
Fissured	Breaks along definite planes or fractures with little resistance.
Slickensided	Fracture planes appear polished or glossy; sometimes striated.
Blocky	Cohesive soil that can be broken down into small angular lumps that resist further breakdown.
Lensed	Inclusion of small pockets of different soils, such as small lenses of sand scattered through a mass of clay.
Homogeneous	Same color and appearance throughout.

### Gradation

Poorly Graded	Narrow range of grain sizes present or, within the range of grain sizes present, one or more sizes are missing (Gap Graded). Meets criteria in ASTM D2487, if tested.
Well-Graded	Full range and even distribution of grain sizes present. Meets criteria in ASTM D2487, if tested.

### Cementation<sup>1</sup>

Weak	Crumbles/breaks with handling or slight finger pressure.
Moderate	Crumbles or breaks with considerable finger pressure.
Strong	Will not crumble or break with finger pressure.

### Angularity and Shape<sup>1</sup>

Angular	Sharp edges and unpolished planar surfaces.
Subangular	Similar to angular, but with rounded edges.
Subrounded	Nearly planar sides with well-rounded edges.
Rounded	Smoothly curved sides with no edges.
Flat	Width/thickness ratio > 3.
Elongated	Length/width ratio > 3.

### Plasticity<sup>2</sup>

Nonplastic	Cannot roll a 1/8-in. thread at any water content.	PI < 4
Low	A thread can barely be rolled and a lump cannot be formed when drier than the plastic limit.	4 < PI < 10
Medium	A thread is easy to roll and not much time is required to reach the plastic limit. The thread cannot be rerolled after reaching the plastic limit. A lump crumbles when drier than the plastic limit.	10 < PI < 20
High	It takes considerable time rolling and kneading to reach the plastic limit. A thread can be rerolled several times after reaching the plastic limit. A lump can be formed without crumbling when drier than the plastic limit.	PI > 21

### Standard Penetration Test (SPT)<sup>3</sup>

Hammer	140 pounds with a 30-inch free fall. Rope on 6- to 10-inch-diameter cathead 2-1/4 rope turns, > 100 rpm. If automatic hammers are used, blow counts shown on boring logs should be adjusted to account for efficiency of hammer.
Sampler	10 to 30 inches long Shoe I.D. = 1.375 inches Barrel I.D. = 1.5 inches Barrel O.D. = 2 inches
N-Value	Sum blow counts for second and third 6-inch increments. Refusal: 50 blows for 6 inches or less or 10 blows for 0 inch.

### Additional Terms

Mottled	Irregular patches of different colors.
Bioturbated	Soil disturbance or mixing by plants or animals.
Diamict	Nonsorted sediment; sand and gravel in silt and/or clay matrix.
Cuttings	Material brought to surface by drilling.
Slough	Material that caved from sides of borehole.
Sheared	Disturbed texture, mix of strengths.

### Moisture Content

Dry	Absence of moisture, dusty, dry to the touch.
Moist	Damp but no visible water.
Wet	Visible free water, from below water table.

**Notes:**

<sup>1</sup>Reprinted, with permission, from ASTM D2488 - 09a Standard Practice for Description and Identification of Soils (Visual-Manual Procedure), copyright ASTM International, 100 Barr Harbor Drive, West Conshohocken, PA 19428. A copy of the complete standard may be obtained from ASTM International, www.astm.org.

<sup>2</sup>Adapted, with permission, from ASTM D2488 - 09a Standard Practice for Description and Identification of Soils (Visual-Manual Procedure), copyright ASTM International, 100 Barr Harbor Drive, West Conshohocken, PA 19428. A copy of the complete standard may be obtained from ASTM International, www.astm.org.

<sup>3</sup>Penetration resistances (N-values) shown on boring logs are as recorded in the field and have not been corrected for hammer efficiency, overburden, or other factors.

**Unified Soil Classification System (USCS)**  
Modified From USACE Tech Memo 3-357, ASTM D2487, and ASTM D2488

Major Divisions	Symbol	Typical Identifications		
Coarse-Grained Soils (more than 50% retained on No. 200 sieve)	Gravels (more than 50% of coarse fraction retained on No. 4 sieve)	Gravel (less than 5% fines)	GW  Well-graded Gravel; Well-graded Gravel with Sand	
		GP  Poorly Graded Gravel; Poorly Graded Gravel with Sand		
	Silty or Clayey Gravel (more than 12% fines)	GM  Silty Gravel; Silty Gravel with Sand		
		GC  Clayey Gravel; Clayey Gravel with Sand		
	Sands (50% or more of coarse fraction passes the No. 4 sieve)	Sand (less than 5% fines)	SW  Well-graded Sand; Well-graded Sand with Gravel	
			SP  Poorly Graded Sand; Poorly Graded Sand with Gravel	
		Silty or Clayey Sand (more than 12% fines)	SM  Silty Sand; Silty Sand with Gravel	
			SC  Clayey Sand; Clayey Sand with Gravel	
	Fine-Grained Soils (50% or more passes the No. 200 sieve)	Silt and Clays (liquid limit less than 50)	Inorganic	ML  Silt; Silt with Sand or Gravel; Sandy or Gravelly Silt
			CL  Lean Clay; Lean Clay with Sand or Gravel; Sandy or Gravelly Lean Clay	
Organic			OL  Organic Silt or Clay; Organic Silt or Clay with Sand or Gravel; Sandy or Gravelly Organic Silt or Clay	
Silt and Clays (liquid limit 50 or more)		Inorganic	MH  Elastic Silt; Elastic Silt with Sand or Gravel; Sandy or Gravelly Elastic Silt	
		CH  Fat Clay; Fat Clay with Sand or Gravel; Sandy or Gravelly Fat Clay		
		Organic	OH  Organic Silt or Clay; Organic Silt or Clay with Sand or Gravel; Sandy or Gravelly Organic Silt or Clay	
Highly Organic Soils	Primarily organic matter, dark in color, and organic odor	PT  Peat or other highly organic soils (see ASTM D4427)		

**Acronyms and Abbreviations**

ATD At Time of Drilling	MgO Magnesium Oxide	psi Pounds per Square Inch
Diam. Diameter	mm Millimeter	PVC Polyvinyl Chloride
Elev. Elevation	MnO Manganese Oxide	rpm Rotations per Minute
ft Feet	NA Not Applicable or Not Available	SPT Standard Penetration Test
FeO Iron Oxide	NP Nonplastic	USCS Unified Soil Classification System
gal Gallons	O.D. Outside Diameter	q <sub>u</sub> Unconfined Compressive Strength
Horiz. Horizontal	OW Observation Well	VWP Vibrating Wire Piezometer
HSA Hollow-Stem Auger	pcf Pounds per Cubic Foot	Vert. Vertical
I.D. Inside Diameter	PID Photoionization Detector	WOH Weight of Hammer
in Inches	PMT Pressuremeter Test	WOR Weight of Rods
lbs Pounds	ppm Parts per Million	Wt Weight

**Well and Backfill Symbols**

	Bentonite Cement Grout
	Bentonite Grout
	Bentonite Chips
	Silica Sand
	Perforated or Screened Casing
	Surface Cement Seal
	Asphalt or Cap
	Slough
	Inclinometer or Non-perforated Casing
	Instrumentation Riser or Electrical Lead
	Vibrating Wire Piezometer with Designation

**Relative Density Cohesionless Soils**

N, SPT, Blows/ft	Relative Density
< 4	Very loose
4 - 10	Loose
10 - 30	Medium dense
30 - 50	Dense
> 50	Very dense

**Relative Consistency Cohesive Soils**

N, SPT, Blows/ft	Relative Consistency
< 2	Very soft
2 - 4	Soft
4 - 8	Medium stiff
8 - 15	Stiff
15 - 30	Very stiff
> 30	Hard

**Percentages<sup>1, 2</sup>**

Trace	< 5%
Few	5 to 10%
Little	15 to 25%
Some	30 to 45%
Mostly	50 to 100%

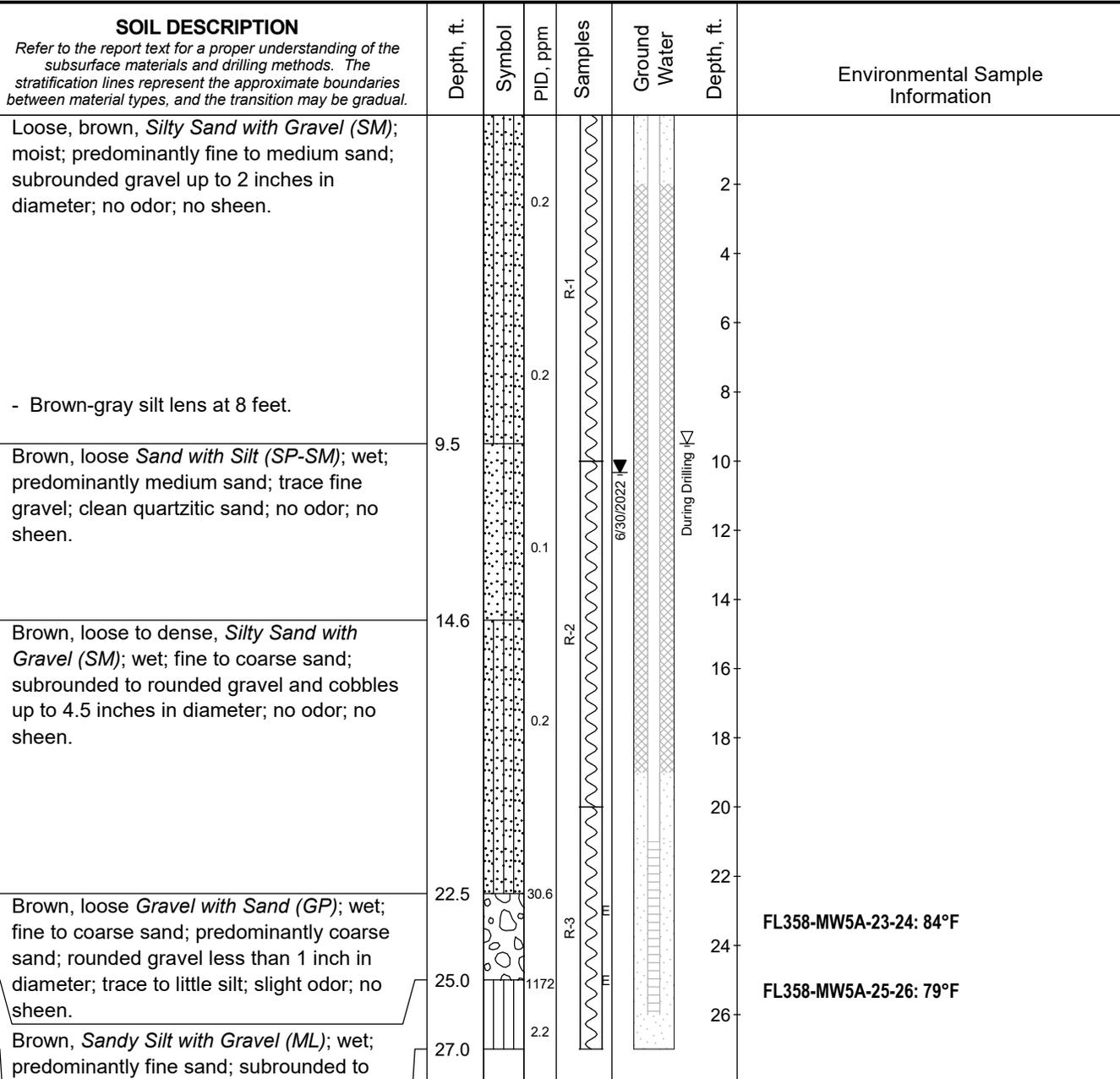
**Notes:**

Dual symbols (symbols separated by a hyphen, i.e., SP-SM, Sand with Silt) are used for soils with between 5% and 12% fines or when the liquid limit and plasticity index values plot in the CL-ML area of the plasticity chart. Graphics shown on the logs for these soil types are a combination of the two graphic symbols (e.g., SP and SM).

Borderline symbols (symbols separated by a slash, i.e., CL/ML, Lean Clay to Silt; SP-SM/SM, Sand with Silt to Silty Sand) indicate that the soil properties are close to the defining boundary between two groups.

No. 4 size = 4.75 mm = 0.187 in.; No. 200 size = 0.075 mm = 0.003 in.

Total Depth: 27 ft. Northing: ~ 119,141 ft. Drilling Method: Sonic Core Hole Diam.: 6 in.  
 Top Elevation: ~ 435.5 ft. Easting: ~ 1,275,745 ft. Drilling Company: Holt Services Rod Diam.: 4-inch  
 Vert. Datum: NAVD88 Station: ~ N/A Drill Rig Equipment: Terra Sonic 150 C.C. Hammer Type: \_\_\_\_\_  
 Horiz. Datum: WA State Plane N Offset: ~ N/A Other Comments: No water/fluid added



CONTINUED NEXT SHEET

**LEGEND**

- \* Sample Not Recovered
- E Environmental Sample Obtained
- Soil Core (as in Sonic Core Borings)
- Well Screen and Sand Filter
- Bentonite-Cement Grout
- Bentonite Chips/Pellets
- Bentonite Grout
- Ground Water Level ATD
- Ground Water Level in Well

**NOTES**

- Refer to KEY for explanation of symbols, codes, abbreviations, and definitions.
- Groundwater level, if indicated above, is for the date specified and may vary.
- USCS designation is based on visual-manual classification and selected lab testing.
- Ecology Well Tag: BNL 558.

FL358 Monitoring Wells  
Federal Way, Washington

**LOG OF BORING FL358-MW5A**

October 2022

105474-050

**SHANNON & WILSON, INC.**  
Geotechnical and Environmental Consultants

Sheet 1 of 2

MASTER LOG E-ENV - NOT PLOT 105474-050.GPJ SHAN WIL 6/30/22 Rev. JXS Typ: LKN

Total Depth: 27 ft. Northing: ~ 119,141 ft. Drilling Method: Sonic Core Hole Diam.: 6 in.  
 Top Elevation: ~ 435.5 ft. Easting: ~ 1,275,745 ft. Drilling Company: Holt Services Rod Diam.: 4-inch  
 Vert. Datum: NAVD88 Station: ~ N/A Drill Rig Equipment: Terra Sonic 150 C.C. Hammer Type: \_\_\_\_\_  
 Horiz. Datum WA State Plane N Offset: ~ N/A Other Comments: No water/fluid added

<b>SOIL DESCRIPTION</b> <i>Refer to the report text for a proper understanding of the subsurface materials and drilling methods. The stratification lines represent the approximate boundaries between material types, and the transition may be gradual.</i>	Depth, ft.	Symbol	PID, ppm	Samples	Ground Water	Depth, ft. Environmental Sample Information
rounded gravel and cobbles up to 5 inches in diameter; slight odor; no sheen. - Color changes to gray/blue-gray, photoionization detector readings drop to 2.2 parts per million, less wet (no water yield) at 26.5 feet.  <b>BOTTOM OF BORING COMPLETED 6/22/2022</b>						30 32 34 36 38 40 42 44 46 48 50 52 54

**LEGEND**

- \* Sample Not Recovered
- E Environmental Sample Obtained
- Soil Core (as in Sonic Core Borings)
- Well Screen and Sand Filter
- Bentonite-Cement Grout
- Bentonite Chips/Pellets
- Bentonite Grout
- Ground Water Level ATD
- Ground Water Level in Well

**NOTES**

1. Refer to KEY for explanation of symbols, codes, abbreviations, and definitions.
2. Groundwater level, if indicated above, is for the date specified and may vary.
3. USCS designation is based on visual-manual classification and selected lab testing.
4. Ecology Well Tag: BNL 558.

FL358 Monitoring Wells  
Federal Way, Washington

**LOG OF BORING FL358-MW5A**

October 2022

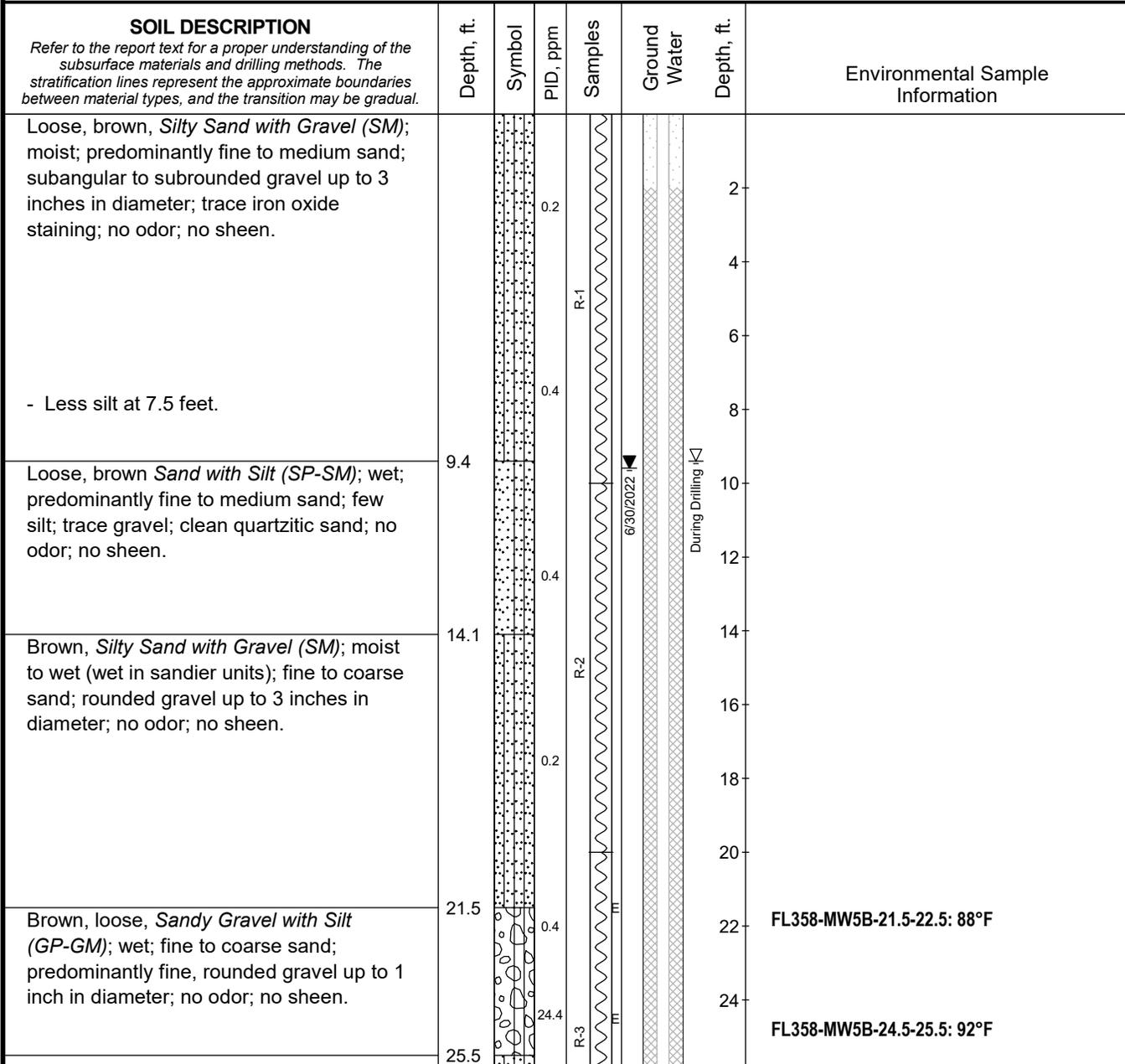
105474-050

**SHANNON & WILSON, INC.**  
Geotechnical and Environmental Consultants

Sheet 2 of 2

MASTER LOG E-ENV - NOT PLOT 105474-050.GPJ SHAN\_WIL\_GB@sgg.com 6/22 Rev: JXS Typ: LKN

Total Depth: 40 ft. Northing: ~ 119,143 ft. Drilling Method: Sonic Core Hole Diam.: 6 in.  
 Top Elevation: ~ 435.5 ft. Easting: ~ 1,275,745 ft. Drilling Company: Holt Services Rod Diam.: 4-inch  
 Vert. Datum: NAVD88 Station: ~ N/A Drill Rig Equipment: Terra Sonic 150 C.C. Hammer Type: \_\_\_\_\_  
 Horiz. Datum: WA State Plane N Offset: ~ N/A Other Comments: No water/fluid added



CONTINUED NEXT SHEET

**LEGEND**

- \* Sample Not Recovered
- E Environmental Sample Obtained
- [Symbol] Soil Core (as in Sonic Core Borings)
- [Symbol] Well Screen and Sand Filter
- [Symbol] Bentonite-Cement Grout
- [Symbol] Bentonite Chips/Pellets
- [Symbol] Bentonite Grout
- ▽ Ground Water Level ATD
- ▼ Ground Water Level in Well

**NOTES**

1. Refer to KEY for explanation of symbols, codes, abbreviations, and definitions.
2. Groundwater level, if indicated above, is for the date specified and may vary.
3. USCS designation is based on visual-manual classification and selected lab testing.
4. Ecology Well Tag: BNL 558.

FL358 Monitoring Wells  
Federal Way, Washington

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**LOG OF BORING FL358-MW5B**

October 2022 105474-050

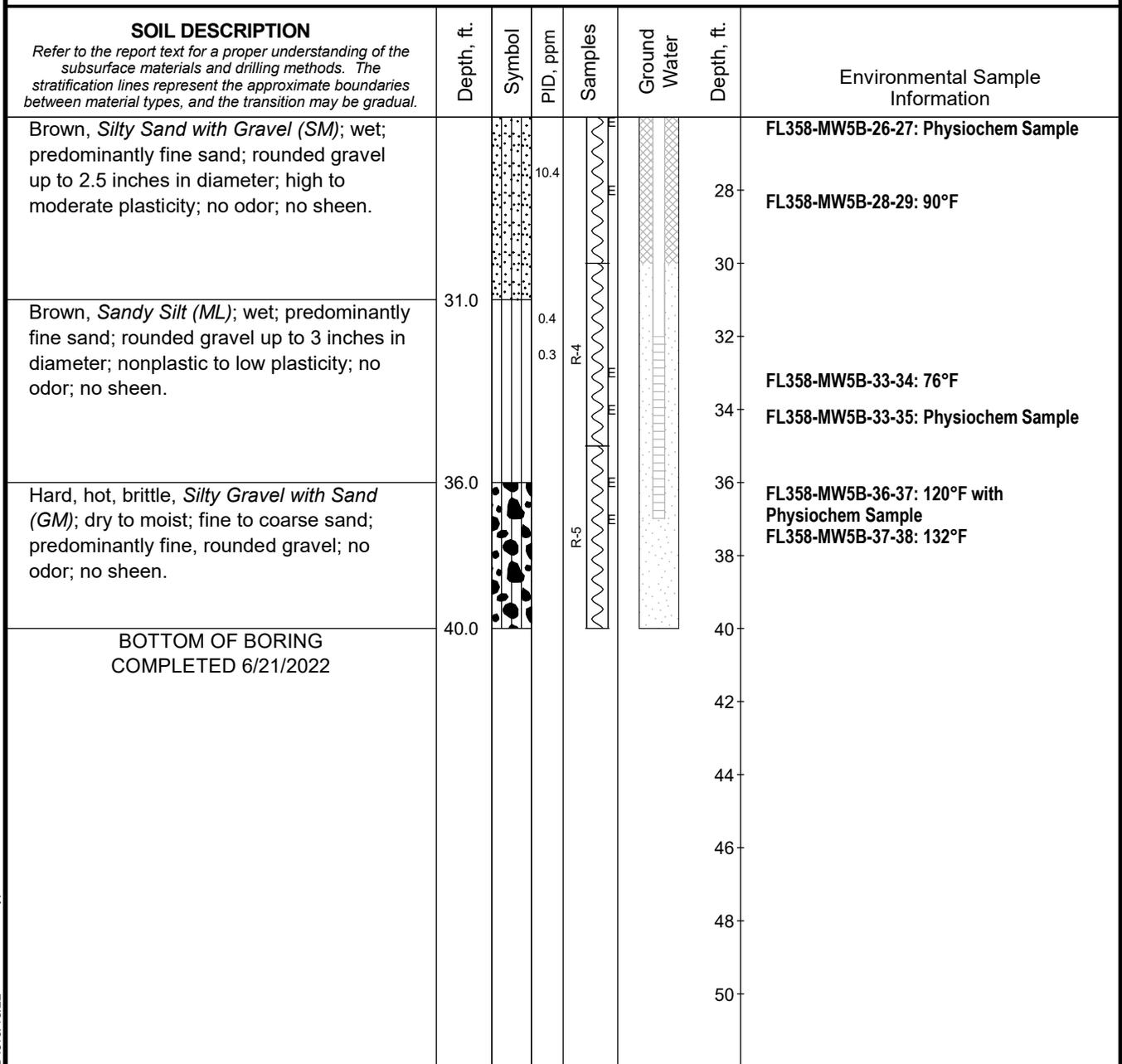
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**SHANNON & WILSON, INC.**  
Geotechnical and Environmental Consultants

Sheet 1 of 2

MASTER LOG E-ENV - NOT PLOT 105474-050.GPJ SHAN WIL.GPJ Rev. JXS Typ: LKN

Total Depth: 40 ft. Northing: ~ 119,143 ft. Drilling Method: Sonic Core Hole Diam.: 6 in.  
 Top Elevation: ~ 435.5 ft. Easting: ~ 1,275,745 ft. Drilling Company: Holt Services Rod Diam.: 4-inch  
 Vert. Datum: NAVD88 Station: ~ N/A Drill Rig Equipment: Terra Sonic 150 C.C. Hammer Type: \_\_\_\_\_  
 Horiz. Datum: WA State Plane N Offset: ~ N/A Other Comments: No water/fluid added



**LEGEND**

- \* Sample Not Recovered
- E Environmental Sample Obtained
- Soil Core (as in Sonic Core Borings)
- Well Screen and Sand Filter
- Bentonite-Cement Grout
- Bentonite Chips/Pellets
- Bentonite Grout
- Ground Water Level ATD
- Ground Water Level in Well

**NOTES**

- Refer to KEY for explanation of symbols, codes, abbreviations, and definitions.
- Groundwater level, if indicated above, is for the date specified and may vary.
- USCS designation is based on visual-manual classification and selected lab testing.
- Ecology Well Tag: BNL 558.

FL358 Monitoring Wells  
Federal Way, Washington

**LOG OF BORING FL358-MW5B**

October 2022

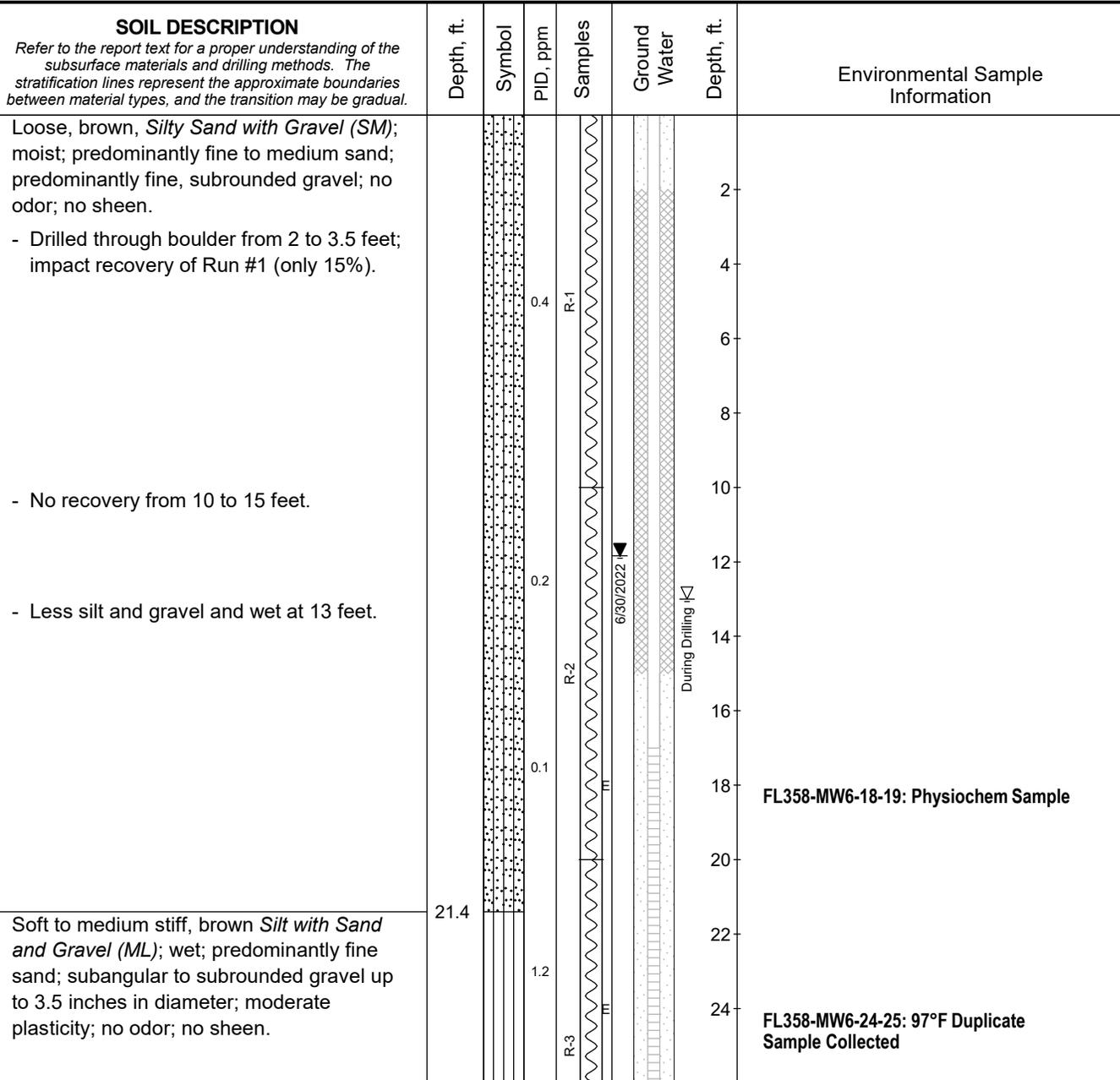
105474-050

**SHANNON & WILSON, INC.**  
Geotechnical and Environmental Consultants

Sheet 2 of 2

MASTER LOG E-ENV - NOT PLOT 105474-050.GPJ SHAN\_WIL\_GB@sgg.com 10/22 Rev: JXS Typ: LKN

Total Depth: 40 ft. Northing: ~ 119,109 ft. Drilling Method: Sonic Core Hole Diam.: 6 in.  
 Top Elevation: ~ 435.7 ft. Easting: ~ 1,275,729 ft. Drilling Company: Holt Services Rod Diam.: 4-inch  
 Vert. Datum: NAVD88 Station: ~ N/A Drill Rig Equipment: Terra Sonic 150 C.C. Hammer Type: \_\_\_\_\_  
 Horiz. Datum WA State Plane N Offset: ~ N/A Other Comments: No water/fluid added



LEGEND

* Sample Not Recovered	[Symbol]	Well Screen and Sand Filter
E Environmental Sample Obtained	[Symbol]	Bentonite-Cement Grout
[Symbol] Soil Core (as in Sonic Core Borings)	[Symbol]	Bentonite Chips/Pellets
	[Symbol]	Bentonite Grout
	[Symbol]	Ground Water Level ATD
	[Symbol]	Ground Water Level in Well

NOTES

- Refer to KEY for explanation of symbols, codes, abbreviations, and definitions.
- Groundwater level, if indicated above, is for the date specified and may vary.
- USCS designation is based on visual-manual classification and selected lab testing.
- Ecology Well Tag: BNL 558.

FL358 Monitoring Wells  
Federal Way, Washington

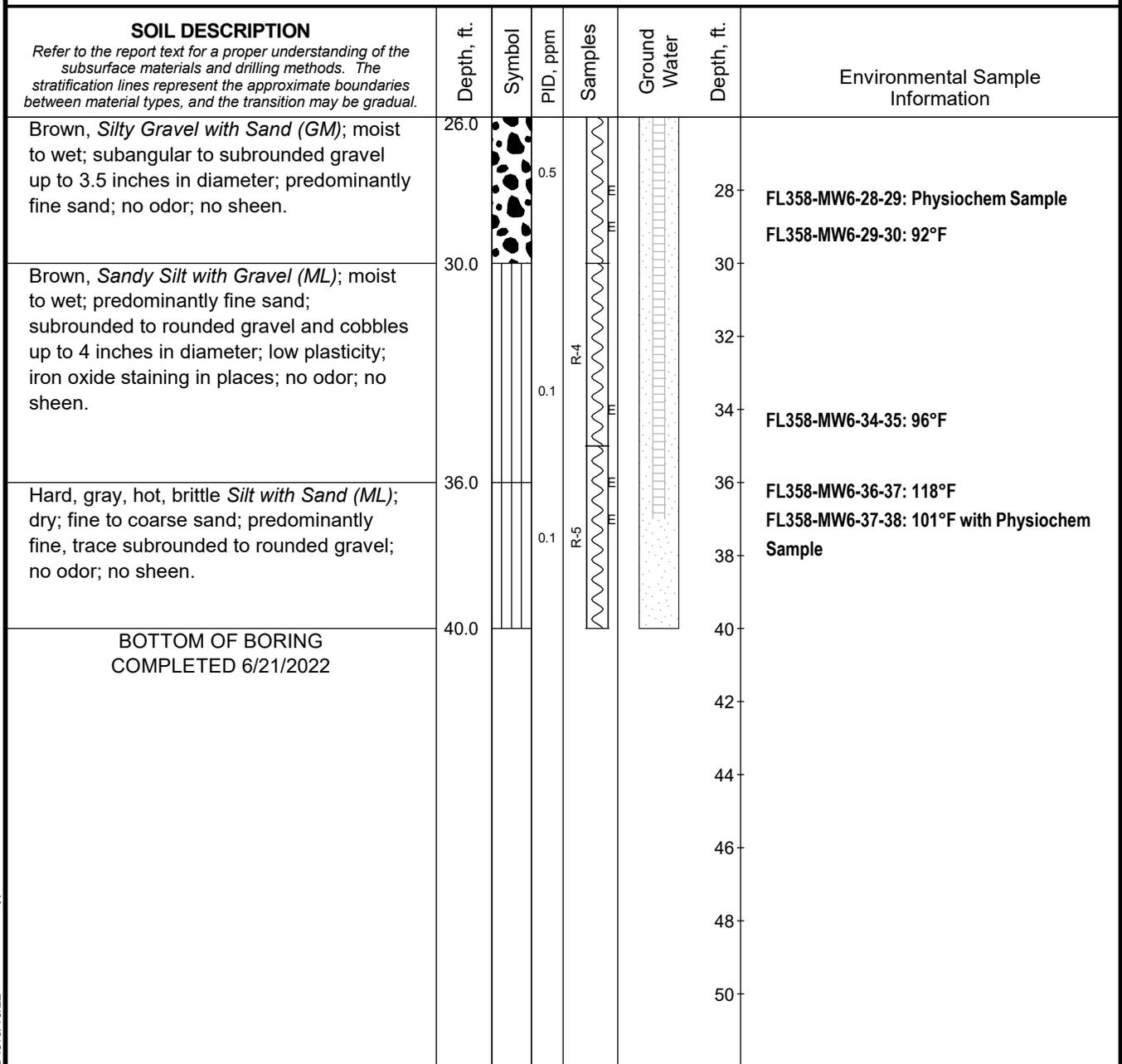
## LOG OF BORING FL358-MW6

October 2022 105474-050

**SHANNON & WILSON, INC.**  
Geotechnical and Environmental Consultants Sheet 1 of 2

MASTER LOG E-ENV - NOT PLOT 105474-050.GPJ SHAN\_WIL\_GB@sgc.com 10/22 Rev: JXS Typ: LKN

Total Depth: 40 ft. Northing: ~ 119,109 ft. Drilling Method: Sonic Core Hole Diam.: 6 in.  
 Top Elevation: ~ 435.7 ft. Easting: ~ 1,275,729 ft. Drilling Company: Holt Services Rod Diam.: 4-inch  
 Vert. Datum: NAVD88 Station: ~ N/A Drill Rig Equipment: Terra Sonic 150 C.C. Hammer Type: \_\_\_\_\_  
 Horiz. Datum: WA State Plane N Offset: ~ N/A Other Comments: No water/fluid added



**LEGEND**

- \* Sample Not Recovered
- E Environmental Sample Obtained
- Soil Core (as in Sonic Core Borings)
- Bentonite Chips/Pellets
- Ground Water Level ATD

**NOTES**

1. Refer to KEY for explanation of symbols, codes, abbreviations, and definitions.
2. Groundwater level, if indicated above, is for the date specified and may vary.
3. USCS designation is based on visual-manual classification and selected lab testing.
4. Ecology Well Tag: BNL 558.

FL358 Monitoring Wells  
Federal Way, Washington

**LOG OF BORING FL358-MW6**

October 2022

105474-050

**SHANNON & WILSON, INC.**  
Geotechnical and Environmental Consultants

Sheet 2 of 2

MASTER LOG E-ENV - NOT PLOT 105474-050.GPJ SHAN\_WIL.GB@sgc.com 10/22 Rev: JXS Typ: LKN

Total Depth: 35 ft. Northing: ~ 119,051 ft. Drilling Method: Sonic Core Hole Diam.: 6 in.  
 Top Elevation: ~ 433.6 ft. Easting: ~ 1,275,653 ft. Drilling Company: Holt Services Rod Diam.: 4-inch  
 Vert. Datum: NAVD88 Station: ~ N/A Drill Rig Equipment: Terra Sonic 150 C.C. Hammer Type: \_\_\_\_\_  
 Horiz. Datum: WA State Plane N Offset: ~ N/A Other Comments: No water/fluid added

SOIL DESCRIPTION <i>Refer to the report text for a proper understanding of the subsurface materials and drilling methods. The stratification lines represent the approximate boundaries between material types, and the transition may be gradual.</i>	Depth, ft.	Symbol	PID, ppm	Samples	Ground Water	Depth, ft.	Environmental Sample Information
Air knife vacuum clearance to 5 feet below ground surface to clear location of nearby utilities.						2	
			0.1			4	
Loose, grayish-brown to brown, <i>Silty Sand with Gravel (SM)</i> ; moist; predominantly fine sand; subrounded gravel up to 2 inches in diameter; no odor; no sheen.	5.0		0.1	R-1		6	
			0.1			8	
			0.1			10	
Bluish-gray to gray, <i>Sandy Silt with Gravel (ML)</i> ; wet; fine to medium sand; subrounded to rounded gravel up to 2.5 inches in diameter; low to moderate plasticity; no odor; no sheen.	10.8		0.1	R-2		12	
			0.1			14	
- Color changes to dark brown and black with high organic content and sulfur-like odor at 16 feet.	17.4		0			16	
			0			18	
Light gray to gray, <i>Sandy Silt with Gravel (ML)</i> ; wet; fine to coarse sand; subrounded gravel up to 1 inch in diameter; no odor; no sheen.	22.3		0.1			20	
			0.1			22	
Loose, grayish-brown, <i>Silty Sand with Gravel (SM)</i> ; wet; fine to coarse sand; subrounded to rounded gravel up to 1 inch in diameter; no odor; no sheen.	24.3		0.1	R-3		24	

CONTINUED NEXT SHEET

**LEGEND**

- \* Sample Not Recovered
- Soil Core (as in Sonic Core Borings)
- Well Screen and Sand Filter
- Bentonite-Cement Grout
- Bentonite Chips/Pellets
- Bentonite Grout
- Ground Water Level ATD
- Ground Water Level in Well

**NOTES**

1. Refer to KEY for explanation of symbols, codes, abbreviations, and definitions.
2. Groundwater level, if indicated above, is for the date specified and may vary.
3. USCS designation is based on visual-manual classification and selected lab testing.
4. Ecology Well Tag: BNL 558.

FL358 Monitoring Wells  
Federal Way, Washington

**LOG OF BORING FL358-MW7**

October 2022

105474-050

**SHANNON & WILSON, INC.**  
Geotechnical and Environmental Consultants

Sheet 1 of 2

MASTER LOG E-ENV - NOT PLOT 105474-050.GPJ SHAN\_WIL\_GB@sgc.com 10/22 Rev: JXS Typ: LKN

Total Depth: 35 ft. Northing: ~ 119,051 ft. Drilling Method: Sonic Core Hole Diam.: 6 in.  
 Top Elevation: ~ 433.6 ft. Easting: ~ 1,275,653 ft. Drilling Company: Holt Services Rod Diam.: 4-inch  
 Vert. Datum: NAVD88 Station: ~ N/A Drill Rig Equipment: Terra Sonic 150 C.C. Hammer Type: \_\_\_\_\_  
 Horiz. Datum WA State Plane N Offset: ~ N/A Other Comments: No water/fluid added

SOIL DESCRIPTION <i>Refer to the report text for a proper understanding of the subsurface materials and drilling methods. The stratification lines represent the approximate boundaries between material types, and the transition may be gradual.</i>	Depth, ft.	Symbol	PID, ppm	Samples	Ground Water	Depth, ft.	Environmental Sample Information
Light brown, <i>Sandy Silt with Gravel (ML)</i> ; wet; predominantly fine sand; subrounded to rounded gravel and cobbles up to 4 inches in diameter; no odor; no sheen.  - Decreasing gravel content at 30 feet.			0.1	R-4		28	
Hard, gray, brittle, hot, <i>Sandy Silt with Gravel (ML)</i> ; dry; no odor; no sheen.	33.0		0.2			30	
BOTTOM OF BORING COMPLETED 6/20/2022	35.0		0			34	
						36	
						38	
						40	
						42	
						44	
						46	
						48	
						50	

**LEGEND**

- \* Sample Not Recovered
- ☐ Soil Core (as in Sonic Core Borings)
- ☐ Well Screen and Sand Filter
- ☐ Bentonite-Cement Grout
- ☐ Bentonite Chips/Pellets
- ☐ Bentonite Grout
- ▽ Ground Water Level ATD
- ▼ Ground Water Level in Well

**NOTES**

1. Refer to KEY for explanation of symbols, codes, abbreviations, and definitions.
2. Groundwater level, if indicated above, is for the date specified and may vary.
3. USCS designation is based on visual-manual classification and selected lab testing.
4. Ecology Well Tag: BNL 558.

FL358 Monitoring Wells  
Federal Way, Washington

**LOG OF BORING FL358-MW7**

October 2022

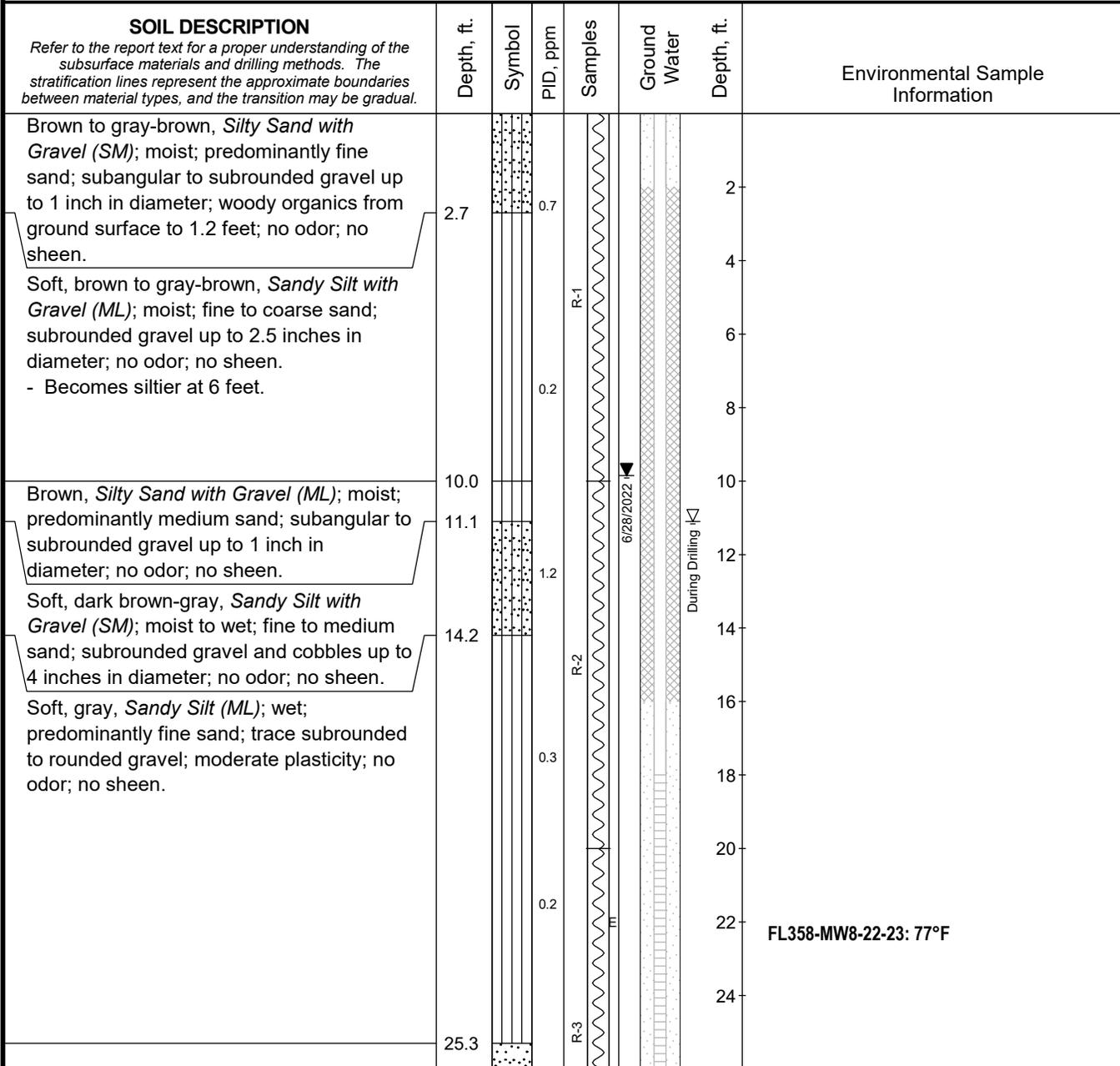
105474-050

**SHANNON & WILSON, INC.**  
Geotechnical and Environmental Consultants

Sheet 2 of 2

MASTER LOG E-ENV - NOT PLOT 105474-050.GPJ SHAN\_WIL\_GB@sgc.com 10/22 Rev: JXS Typ: LKN

Total Depth: 40 ft. Northing: ~ 119,164 ft. Drilling Method: Sonic Core Hole Diam.: 6 in.  
 Top Elevation: ~ 435.7 ft. Easting: ~ 1,275,774 ft. Drilling Company: Holt Services Rod Diam.: 4-inch  
 Vert. Datum: NAVD88 Station: ~ N/A Drill Rig Equipment: Terra Sonic 150 C.C. Hammer Type: \_\_\_\_\_  
 Horiz. Datum: WA State Plane N Offset: ~ N/A Other Comments: No water/fluid added



CONTINUED NEXT SHEET

**LEGEND**

- \* Sample Not Recovered
- E Environmental Sample Obtained
- [Symbol] Soil Core (as in Sonic Core Borings)
- [Symbol] Well Screen and Sand Filter
- [Symbol] Bentonite-Cement Grout
- [Symbol] Bentonite Chips/Pellets
- [Symbol] Bentonite Grout
- ▽ Ground Water Level ATD
- ▼ Ground Water Level in Well

**NOTES**

- Refer to KEY for explanation of symbols, codes, abbreviations, and definitions.
- Groundwater level, if indicated above, is for the date specified and may vary.
- USCS designation is based on visual-manual classification and selected lab testing.
- Ecology Well Tag: BNL 558.

FL358 Monitoring Wells  
Federal Way, Washington

**LOG OF BORING FL358-MW8**

October 2022

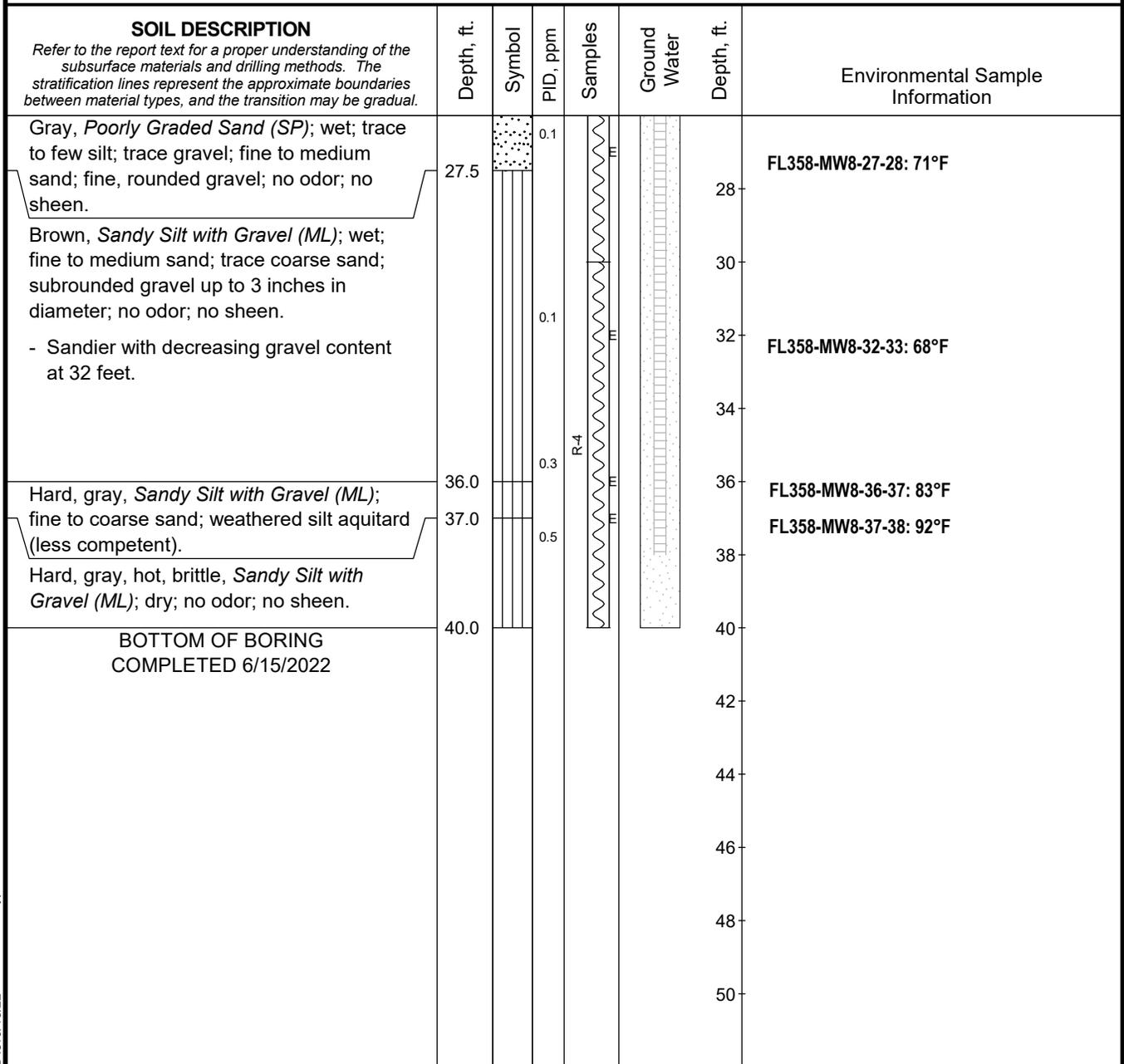
105474-050

**SHANNON & WILSON, INC.**  
Geotechnical and Environmental Consultants

Sheet 1 of 2

MASTER LOG E-ENV - NOT PLOT 105474-050.GPJ SHAN\_WIL\_GB@sgc.com 6/22 Rev: JXS Typ: LKN

Total Depth: 40 ft. Northing: ~ 119,164 ft. Drilling Method: Sonic Core Hole Diam.: 6 in.  
 Top Elevation: ~ 435.7 ft. Easting: ~ 1,275,774 ft. Drilling Company: Holt Services Rod Diam.: 4-inch  
 Vert. Datum: NAVD88 Station: ~ N/A Drill Rig Equipment: Terra Sonic 150 C.C. Hammer Type: \_\_\_\_\_  
 Horiz. Datum WA State Plane N Offset: ~ N/A Other Comments: No water/fluid added



MASTER LOG E-ENV - NOT PLOT 105474-050.GPJ SHAN WIL.GB@sgc.com 10/22 Rev. JXS Typ: LKN

**LEGEND**

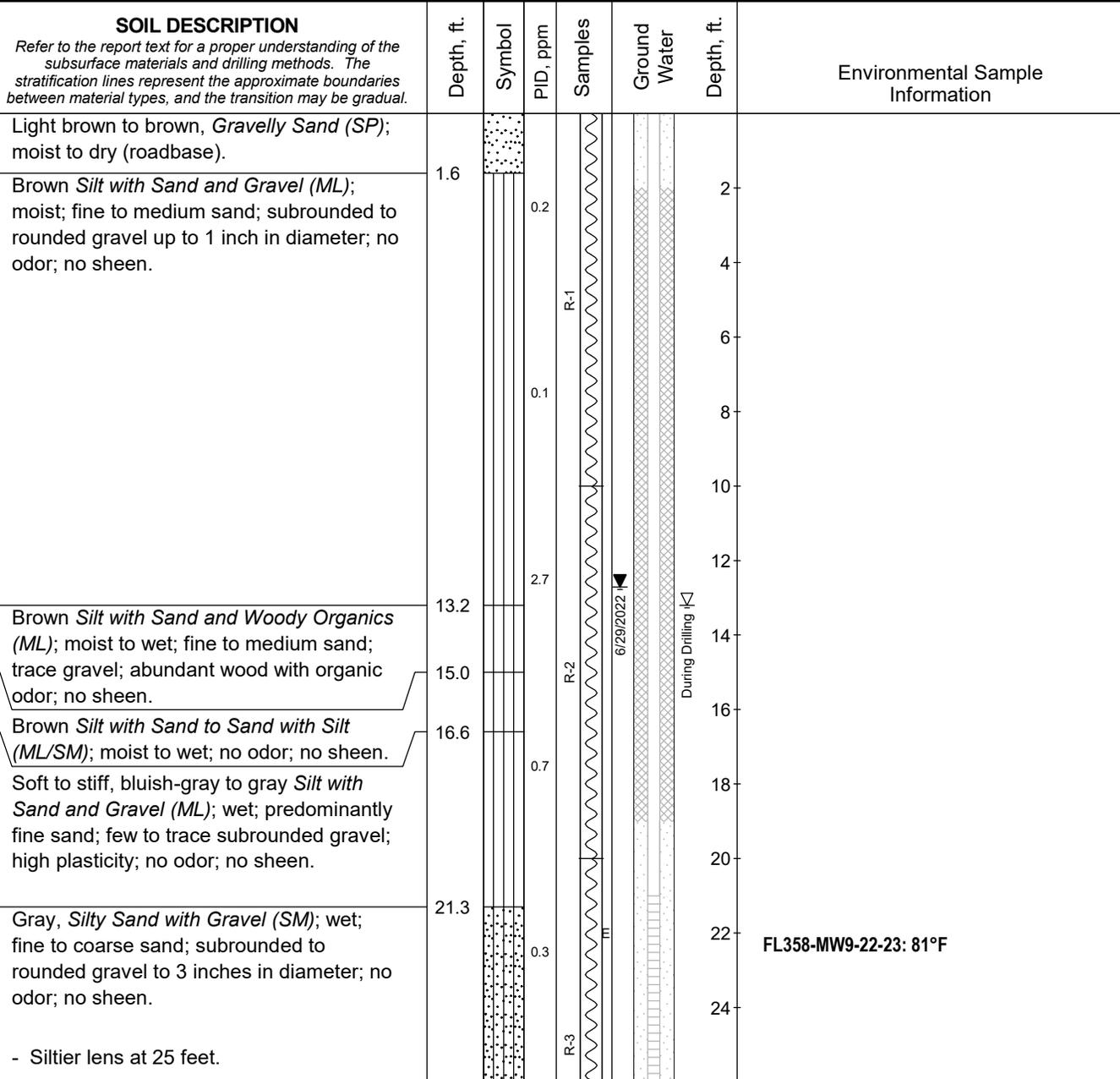
- \* Sample Not Recovered
- E Environmental Sample Obtained
- Soil Core (as in Sonic Core Borings)
- Well Screen and Sand Filter
- Bentonite-Cement Grout
- Bentonite Chips/Pellets
- Bentonite Grout
- Ground Water Level ATD
- Ground Water Level in Well

**NOTES**

1. Refer to KEY for explanation of symbols, codes, abbreviations, and definitions.
2. Groundwater level, if indicated above, is for the date specified and may vary.
3. USCS designation is based on visual-manual classification and selected lab testing.
4. Ecology Well Tag: BNL 558.

FL358 Monitoring Wells Federal Way, Washington	
<b>LOG OF BORING FL358-MW8</b>	
October 2022	105474-050
<b>SHANNON &amp; WILSON, INC.</b> Geotechnical and Environmental Consultants	Sheet 2 of 2

Total Depth: 45 ft. Northing: ~ 119,068 ft. Drilling Method: Sonic Core Hole Diam.: 6 in.  
 Top Elevation: ~ 435.4 ft. Easting: ~ 1,275,765 ft. Drilling Company: Holt Services Rod Diam.: 4-inch  
 Vert. Datum: NAVD88 Station: ~ N/A Drill Rig Equipment: Terra Sonic 150 C.C. Hammer Type: \_\_\_\_\_  
 Horiz. Datum: WA State Plane N Offset: ~ N/A Other Comments: No water/fluid added



CONTINUED NEXT SHEET

LEGEND

- \* Sample Not Recovered
- E Environmental Sample Obtained
- Soil Core (as in Sonic Core Borings)
- Well Screen and Sand Filter
- Bentonite-Cement Grout
- Bentonite Chips/Pellets
- Bentonite Grout
- Ground Water Level ATD
- Ground Water Level in Well

NOTES

1. Refer to KEY for explanation of symbols, codes, abbreviations, and definitions.
2. Groundwater level, if indicated above, is for the date specified and may vary.
3. USCS designation is based on visual-manual classification and selected lab testing.
4. Ecology Well Tag: BNL 558.

FL358 Monitoring Wells  
Federal Way, Washington

LOG OF BORING FL358-MW9

October 2022

105474-050

SHANNON & WILSON, INC.  
Geotechnical and Environmental Consultants

Sheet 1 of 2

MASTER LOG E-ENV - NOT PLOT 105474-050.GPJ SHAN\_WIL\_GB@sgc.com 10/22 Rev: JXS Typ: LKN

Total Depth: 45 ft. Northing: ~ 119,068 ft. Drilling Method: Sonic Core Hole Diam.: 6 in.  
 Top Elevation: ~ 435.4 ft. Easting: ~ 1,275,765 ft. Drilling Company: Holt Services Rod Diam.: 4-inch  
 Vert. Datum: NAVD88 Station: ~ N/A Drill Rig Equipment: Terra Sonic 150 C.C. Hammer Type: \_\_\_\_\_  
 Horiz. Datum: WA State Plane N Offset: ~ N/A Other Comments: No water/fluid added

SOIL DESCRIPTION <i>Refer to the report text for a proper understanding of the subsurface materials and drilling methods. The stratification lines represent the approximate boundaries between material types, and the transition may be gradual.</i>	Depth, ft.	Symbol	PID, ppm	Samples	Ground Water	Depth, ft.	Environmental Sample Information
	29.4		0.1	E		28	FL358-MW9-27-28: 72°F Duplicate Sample Collected
Soft to medium stiff, gray to bluish-gray, <b>Sandy Silt with Gravel (ML)</b> ; wet; predominantly fine sand; subrounded gravel and cobbles up to 4.5 inches in diameter; low to moderate plasticity; no odor; no sheen.	30.5			E		30	
	32.8		0.4	R-4		32	FL358-MW9-31-32: 76°F
Gray Sand with Silt and Gravel (SP-SM); wet; predominantly medium sand; few fine gravel; no odor; no sheen.						34	
Gray, <b>Sandy Silt with Gravel (ML)</b> ; moist to wet; predominantly fine sand; fine gravel; no odor; no sheen.			0.1	R-5		36	FL358-MW9-37-38: 85°F
	40.0		0.1	E		40	FL358-MW9-40-41: 92°F
Hard, gray, hot, brittle, <b>Sandy Silt with Gravel (ML)</b> ; dry; predominantly fine sand; predominantly fine, subrounded to rounded gravel; diamict; no odor; no sheen.						42	FL358-MW9-41-42: 114°F
	45.0		0.2	R-6		44	
BOTTOM OF BORING COMPLETED 6/16/2022						46	
						48	
						50	

MASTER LOG E-ENV - NOT PLOT 105474-050.GPJ SHAN\_WIL\_GB@sgg.com 10/22 Rev: JXS Typ: LKN

**LEGEND**

- \* Sample Not Recovered
- E Environmental Sample Obtained
- Soil Core (as in Sonic Core Borings)
- Well Screen and Sand Filter
- Bentonite-Cement Grout
- Bentonite Chips/Pellets
- Bentonite Grout
- Ground Water Level ATD
- Ground Water Level in Well

**NOTES**

1. Refer to KEY for explanation of symbols, codes, abbreviations, and definitions.
2. Groundwater level, if indicated above, is for the date specified and may vary.
3. USCS designation is based on visual-manual classification and selected lab testing.
4. Ecology Well Tag: BNL 558.

FL358 Monitoring Wells Federal Way, Washington	
<b>LOG OF BORING FL358-MW9</b>	
October 2022	105474-050
<b>SHANNON &amp; WILSON, INC.</b> Geotechnical and Environmental Consultants	Sheet 2 of 2

Total Depth: 40 ft. Northing: ~ 118,988 ft. Drilling Method: Sonic Core Hole Diam.: 6 in.  
 Top Elevation: ~ 433.9 ft. Easting: ~ 1,275,731 ft. Drilling Company: Holt Services Rod Diam.: 4-inch  
 Vert. Datum: NAVD88 Station: ~ N/A Drill Rig Equipment: Terra Sonic 150 C.C. Hammer Type: \_\_\_\_\_  
 Horiz. Datum: WA State Plane N Offset: ~ N/A Other Comments: No water/fluid added

SOIL DESCRIPTION <i>Refer to the report text for a proper understanding of the subsurface materials and drilling methods. The stratification lines represent the approximate boundaries between material types, and the transition may be gradual.</i>	Depth, ft.	Symbol	PID, ppm	Samples	Ground Water	Depth, ft.	Environmental Sample Information
Brown, <i>Sandy Silt with Gravel (ML)</i> ; moist; predominantly fine to medium sand; subrounded gravel up to 3 inches in diameter; no odor; no sheen.  - Increased moisture at 4 feet.			0.3	R-1		2	
Sandy lens ( <i>SP</i> ) with decreased gravel content.	6.5		0.3			4	
Loose, gray, <i>Sandy Gravel with Silt (GP-GM)</i> ; wet; predominantly medium to coarse sand; rounded gravel up to 2 inches in diameter; no odor; no sheen.	8.5		0.4			6	
Gray, <i>Sandy Silt with Gravel (ML)</i> ; wet; predominantly fine sand; subrounded to subangular gravel; becoming sandier from 15.8 to 23 feet; no odor; no sheen.	11.6		0.7	R-2		8	
			0.3			10	
			0.4	R-3		12	
Gray, <i>Gravelly, Sandy Silt (ML)</i> ; wet; occasional lenses of sand with gravel; trace cobbles; fine to coarse sand; subrounded to rounded gravel; no odor; no	23.0					14	
						16	
						18	
						20	
						22	
						24	

CONTINUED NEXT SHEET

LEGEND

- \* Sample Not Recovered
- ☐ Soil Core (as in Sonic Core Borings)
- ☐ Well Screen and Sand Filter
- ☐ Bentonite-Cement Grout
- ☐ Bentonite Chips/Pellets
- ☐ Bentonite Grout
- ▽ Ground Water Level ATD
- ▼ Ground Water Level in Well

NOTES

- Refer to KEY for explanation of symbols, codes, abbreviations, and definitions.
- Groundwater level, if indicated above, is for the date specified and may vary.
- USCS designation is based on visual-manual classification and selected lab testing.
- Ecology Well Tag: BNL 558.

FL358 Monitoring Wells  
Federal Way, Washington

LOG OF BORING FL358-MW10

October 2022

105474-050

SHANNON & WILSON, INC.  
Geotechnical and Environmental Consultants

Sheet 1 of 2

MASTER LOG E-ENV - NOT PLOT 105474-050.GPJ SHAN\_WIL\_GB@sgg.com 10/22 Rev: JXS Typ: LKN

Total Depth: 40 ft. Northing: ~ 118,988 ft. Drilling Method: Sonic Core Hole Diam.: 6 in.  
 Top Elevation: ~ 433.9 ft. Easting: ~ 1,275,731 ft. Drilling Company: Holt Services Rod Diam.: 4-inch  
 Vert. Datum: NAVD88 Station: ~ N/A Drill Rig Equipment: Terra Sonic 150 C.C. Hammer Type: \_\_\_\_\_  
 Horiz. Datum WA State Plane N Offset: ~ N/A Other Comments: No water/fluid added

SOIL DESCRIPTION <i>Refer to the report text for a proper understanding of the subsurface materials and drilling methods. The stratification lines represent the approximate boundaries between material types, and the transition may be gradual.</i>	Depth, ft.	Symbol	PID, ppm	Samples	Ground Water	Depth, ft.	Environmental Sample Information
sheen.			0.2	R-4		28	
- Cobble zone, cobbles up to 5 inches in diameter at 33 feet.			0.8	R-4		30	
Gray Silt with Gravel (ML); moist; trace fine sand; some rounded gravel; no odor; no sheen.	35.0			R-5		32	
Hard, gray, hot, brittle Silt with Sand and Gravel (ML); dry; diamict; no odor; no sheen.	38.0		0.1			34	
<p style="text-align: center;">BOTTOM OF BORING COMPLETED 6/13/2022</p> <p>No soil samples collected from the well boring.</p>	40.0					36	
						38	
						40	
						42	
						44	
						46	
						48	
						50	

**LEGEND**

- \* Sample Not Recovered
- ☐ Soil Core (as in Sonic Core Borings)
- ☐ Well Screen and Sand Filter
- ☐ Bentonite-Cement Grout
- ☐ Bentonite Chips/Pellets
- ☐ Bentonite Grout
- ▽ Ground Water Level ATD
- ▼ Ground Water Level in Well

**NOTES**

1. Refer to KEY for explanation of symbols, codes, abbreviations, and definitions.
2. Groundwater level, if indicated above, is for the date specified and may vary.
3. USCS designation is based on visual-manual classification and selected lab testing.
4. Ecology Well Tag: BNL 558.

FL358 Monitoring Wells  
Federal Way, Washington

**LOG OF BORING FL358-MW10**

October 2022

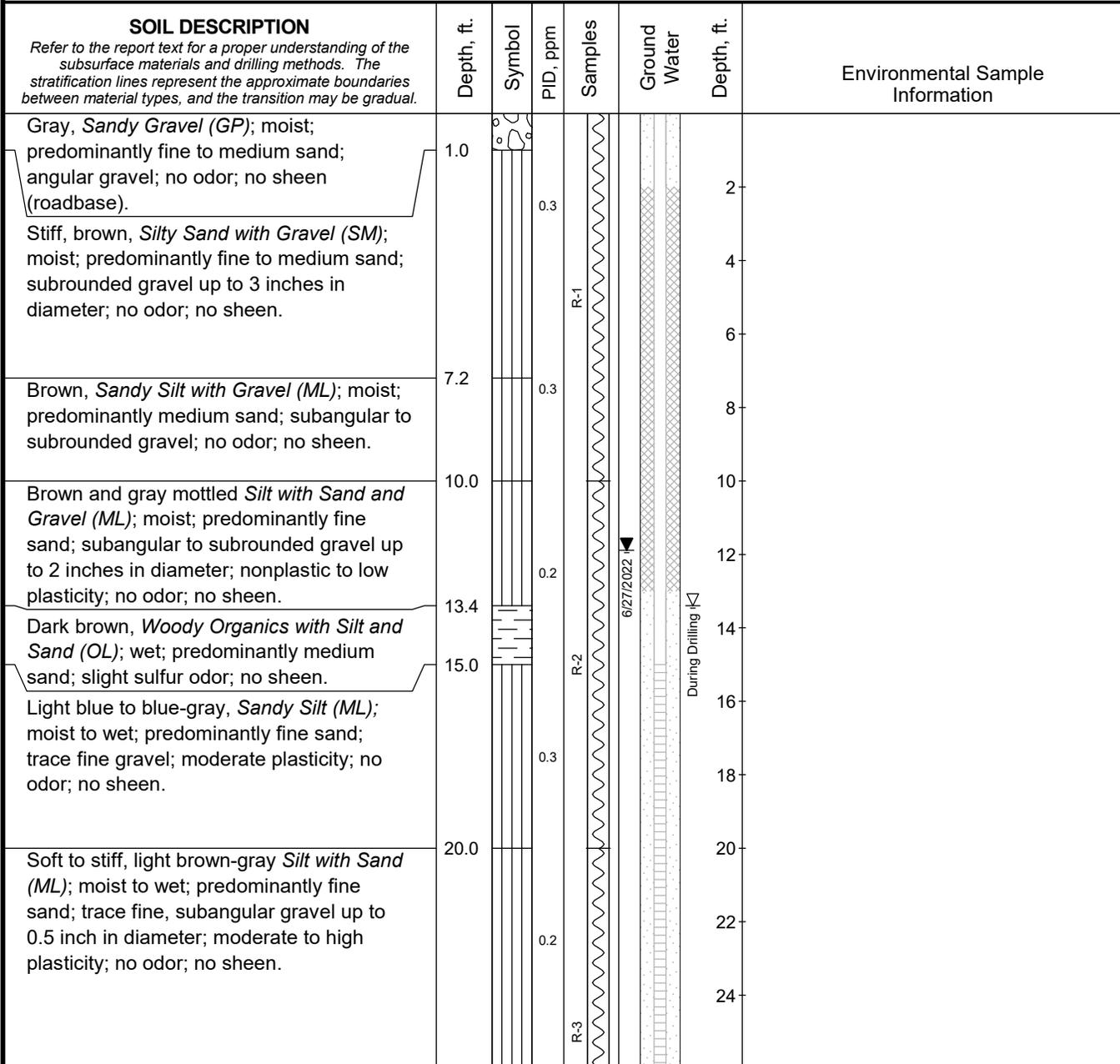
105474-050

**SHANNON & WILSON, INC.**  
Geotechnical and Environmental Consultants

Sheet 2 of 2

MASTER LOG E-ENV - NOT PLOT 105474-050.GPJ SHAN\_WIL\_GB@sgc.com 10/22 Rev: JXS Typ: LKN

Total Depth: 35 ft. Northing: ~ 119,013 ft. Drilling Method: Sonic Core Hole Diam.: 6 in.  
 Top Elevation: ~ 433 ft. Easting: ~ 1,275,627 ft. Drilling Company: Holt Services Rod Diam.: 4-inch  
 Vert. Datum: NAVD88 Station: ~ N/A Drill Rig Equipment: Terra Sonic 150 C.C. Hammer Type: \_\_\_\_\_  
 Horiz. Datum: WA State Plane N Offset: ~ N/A Other Comments: No water/fluid added



CONTINUED NEXT SHEET

LEGEND

- \* Sample Not Recovered
- Soil Core (as in Sonic Core Borings)
- Well Screen and Sand Filter
- Bentonite-Cement Grout
- Bentonite Chips/Pellets
- Bentonite Grout
- Ground Water Level ATD
- Ground Water Level in Well

NOTES

- Refer to KEY for explanation of symbols, codes, abbreviations, and definitions.
- Groundwater level, if indicated above, is for the date specified and may vary.
- USCS designation is based on visual-manual classification and selected lab testing.
- Ecology Well Tag: BNL 558.

FL358 Monitoring Wells  
Federal Way, Washington

LOG OF BORING FL358-MW11

October 2022

105474-050

SHANNON & WILSON, INC.  
Geotechnical and Environmental Consultants

Sheet 1 of 2

MASTER LOG E-ENV - NOT PLOT 105474-050.GPJ SHAN WIL G:\g\g\08\1022 Rev. JKS Typ: LKN

Total Depth: 35 ft. Northing: ~ 119,013 ft. Drilling Method: Sonic Core Hole Diam.: 6 in.  
 Top Elevation: ~ 433 ft. Easting: ~ 1,275,627 ft. Drilling Company: Holt Services Rod Diam.: 4-inch  
 Vert. Datum: NAVD88 Station: ~ N/A Drill Rig Equipment: Terra Sonic 150 C.C. Hammer Type: \_\_\_\_\_  
 Horiz. Datum WA State Plane N Offset: ~ N/A Other Comments: No water/fluid added

SOIL DESCRIPTION <i>Refer to the report text for a proper understanding of the subsurface materials and drilling methods. The stratification lines represent the approximate boundaries between material types, and the transition may be gradual.</i>	Depth, ft.	Symbol	PID, ppm	Samples	Ground Water	Depth, ft.	Environmental Sample Information
			0.1			28	
Hard, hot, brittle <i>Silt with Sand and Gravel (ML)</i> ; dry; fine gravel; fine sand; diamict; no odor; no sheen.	34.0		0.4	R-4		32	
<p style="text-align: center;">BOTTOM OF BORING COMPLETED 6/14/2022</p>	35.0					34	
No soil samples collected from the well boring.						36 38 40 42 44 46 48 50	

**LEGEND**

- \* Sample Not Recovered
- ☐ Soil Core (as in Sonic Core Borings)
- ☐ Well Screen and Sand Filter
- ☐ Bentonite-Cement Grout
- ☐ Bentonite Chips/Pellets
- ☐ Bentonite Grout
- ▽ Ground Water Level ATD
- ▼ Ground Water Level in Well

**NOTES**

1. Refer to KEY for explanation of symbols, codes, abbreviations, and definitions.
2. Groundwater level, if indicated above, is for the date specified and may vary.
3. USCS designation is based on visual-manual classification and selected lab testing.
4. Ecology Well Tag: BNL 558.

FL358 Monitoring Wells  
Federal Way, Washington

**LOG OF BORING FL358-MW11**

October 2022

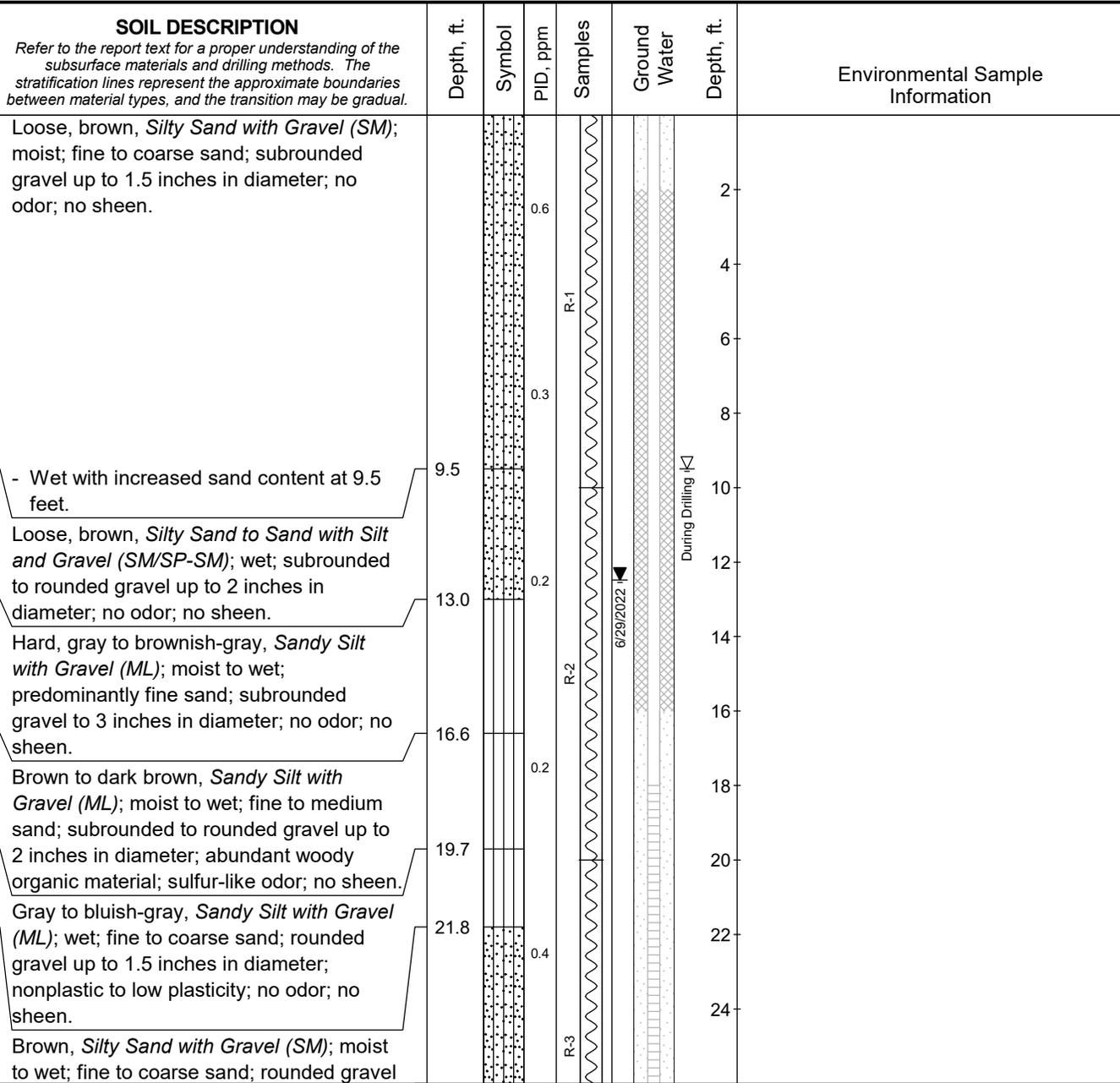
105474-050

**SHANNON & WILSON, INC.**  
Geotechnical and Environmental Consultants

Sheet 2 of 2

MASTER LOG E-ENV - NOT PLOT 105474-050.GPJ SHAN\_WIL\_GB@sgc.com 10/22 Rev: JKS Typ: LKN

Total Depth: 40 ft. Northing: ~ 119,127 ft. Drilling Method: Sonic Core Hole Diam.: 6 in.  
 Top Elevation: ~ 435.2 ft. Easting: ~ 1,275,654 ft. Drilling Company: Holt Services Rod Diam.: 4-inch  
 Vert. Datum: NAVD88 Station: ~ N/A Drill Rig Equipment: Terra Sonic 150 C.C. Hammer Type: \_\_\_\_\_  
 Horiz. Datum WA State Plane N Offset: ~ N/A Other Comments: No water/fluid added



**LEGEND**

* Sample Not Recovered	[Symbol]	Well Screen and Sand Filter
[Symbol] Soil Core (as in Sonic Core Borings)	[Symbol]	Bentonite-Cement Grout
	[Symbol]	Bentonite Chips/Pellets
	[Symbol]	Bentonite Grout
	▽	Ground Water Level ATD
	▼	Ground Water Level in Well

**NOTES**

- Refer to KEY for explanation of symbols, codes, abbreviations, and definitions.
- Groundwater level, if indicated above, is for the date specified and may vary.
- USCS designation is based on visual-manual classification and selected lab testing.
- Ecology Well Tag: BNL 558.

FL358 Monitoring Wells  
Federal Way, Washington

**LOG OF BORING FL358-MW12**

October 2022 105474-050

**SHANNON & WILSON, INC.**  
Geotechnical and Environmental Consultants Sheet 1 of 2

MASTER LOG E-ENV - NOT PLOT 105474-050.GPJ SHAN WIL.GPJ 10/22 Rev. JXS Typ: LKN

Total Depth: 40 ft. Northing: ~ 119,127 ft. Drilling Method: Sonic Core Hole Diam.: 6 in.  
 Top Elevation: ~ 435.2 ft. Easting: ~ 1,275,654 ft. Drilling Company: Holt Services Rod Diam.: 4-inch  
 Vert. Datum: NAVD88 Station: ~ N/A Drill Rig Equipment: Terra Sonic 150 C.C. Hammer Type: \_\_\_\_\_  
 Horiz. Datum WA State Plane N Offset: ~ N/A Other Comments: No water/fluid added

SOIL DESCRIPTION <i>Refer to the report text for a proper understanding of the subsurface materials and drilling methods. The stratification lines represent the approximate boundaries between material types, and the transition may be gradual.</i>	Depth, ft.	Symbol	PID, ppm	Samples	Ground Water	Depth, ft.	Environmental Sample Information
up to 3 inches in diameter; no odor; no sheen.  Brown Silt with Sand and Gravel (ML); moist; predominantly fine sand; trace to few rounded gravel; no odor; no sheen.  - Color changes to gray with decreasing gravel content at 35 feet.	26.0		0.5	R-4		28	
Hard, gray, hot, brittle Silt with Sand and Gravel (ML); dry; fine sand; rounded gravel up to 1 inch in diameter; diamict; no odor; no sheen.	37.0		0	R-5		38	
BOTTOM OF BORING COMPLETED 6/20/2022  No soil samples collected from the well boring.	40.0					40	

**LEGEND**

- \* Sample Not Recovered
-  Soil Core (as in Sonic Core Borings)
-  Well Screen and Sand Filter
-  Bentonite-Cement Grout
-  Bentonite Chips/Pellets
-  Bentonite Grout
-  Ground Water Level ATD
-  Ground Water Level in Well

**NOTES**

1. Refer to KEY for explanation of symbols, codes, abbreviations, and definitions.
2. Groundwater level, if indicated above, is for the date specified and may vary.
3. USCS designation is based on visual-manual classification and selected lab testing.
4. Ecology Well Tag: BNL 558.

FL358 Monitoring Wells  
Federal Way, Washington

**LOG OF BORING FL358-MW12**

October 2022

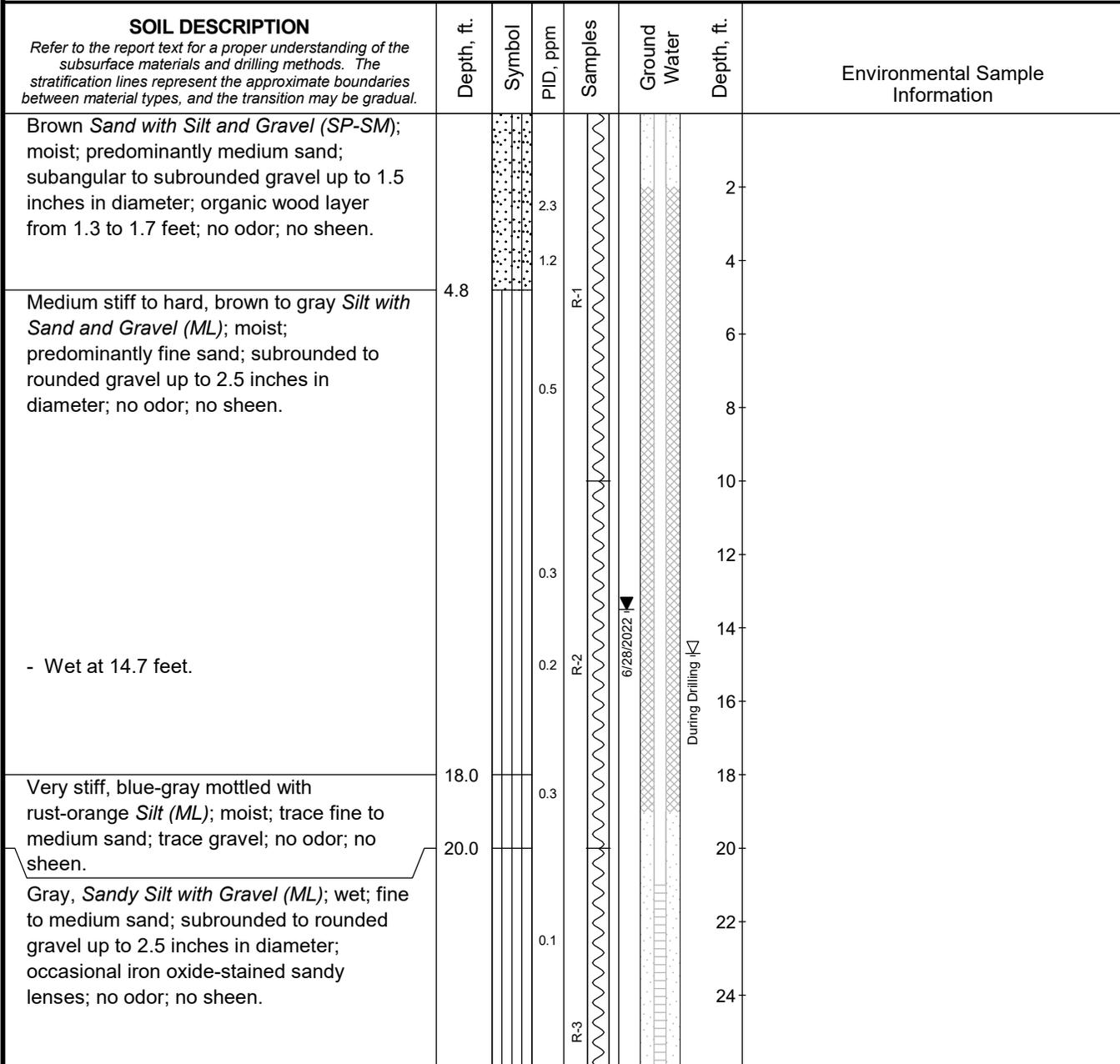
105474-050

**SHANNON & WILSON, INC.**  
Geotechnical and Environmental Consultants

Sheet 2 of 2

MASTER LOG E-ENV - NOT PLOT 105474-050.GPJ SHAN\_WIL\_GB@sgc.com 10/22 Rev: JXS Typ: LKN

Total Depth: 42.5 ft. Northing: ~ 119,170 ft. Drilling Method: Sonic Core Hole Diam.: 6 in.  
 Top Elevation: ~ 435.5 ft. Easting: ~ 1,275,691 ft. Drilling Company: Holt Services Rod Diam.: 4-inch  
 Vert. Datum: NAVD88 Station: ~ N/A Drill Rig Equipment: Terra Sonic 150 C.C. Hammer Type: \_\_\_\_\_  
 Horiz. Datum: WA State Plane N Offset: ~ N/A Other Comments: No water/fluid added



CONTINUED NEXT SHEET

**LEGEND**

- \* Sample Not Recovered
- [Symbol] Soil Core (as in Sonic Core Borings)
- [Symbol] Well Screen and Sand Filter
- [Symbol] Bentonite-Cement Grout
- [Symbol] Bentonite Chips/Pellets
- [Symbol] Bentonite Grout
- ▽ Ground Water Level ATD
- ▼ Ground Water Level in Well

**NOTES**

1. Refer to KEY for explanation of symbols, codes, abbreviations, and definitions.
2. Groundwater level, if indicated above, is for the date specified and may vary.
3. USCS designation is based on visual-manual classification and selected lab testing.
4. Ecology Well Tag: BNL 558.

FL358 Monitoring Wells  
Federal Way, Washington

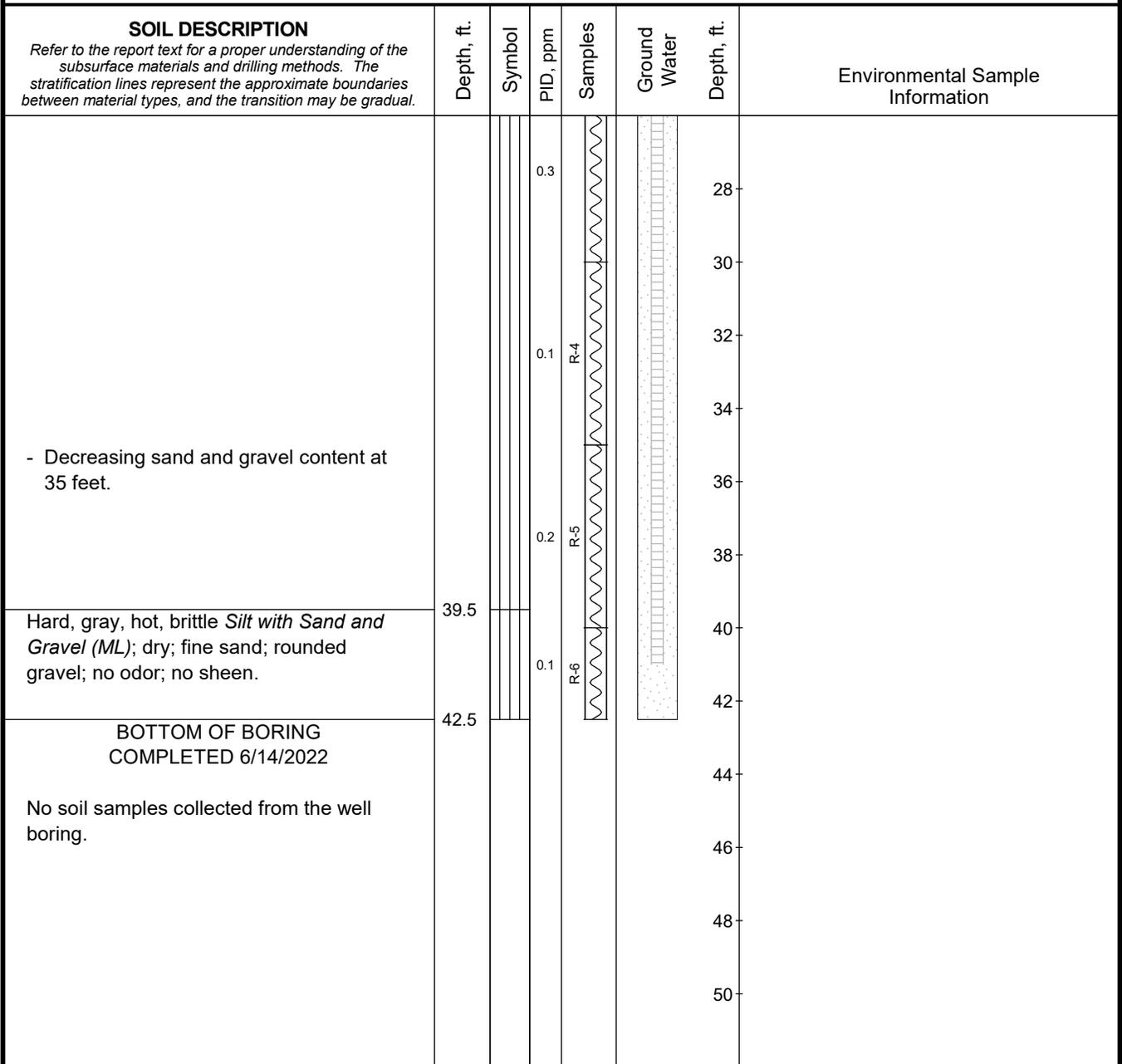
**LOG OF BORING FL358-MW-13**

October 2022 105474-050

**SHANNON & WILSON, INC.**  
Geotechnical and Environmental Consultants Sheet 1 of 2

MASTER LOG E-ENV - NOT PLOT 105474-050.GPJ SHAN\_WIL\_GB@sgc.com 6/22 Rev: JXS Typ: LKN

Total Depth: 42.5 ft. Northing: ~ 119,170 ft. Drilling Method: Sonic Core Hole Diam.: 6 in.  
 Top Elevation: ~ 435.5 ft. Easting: ~ 1,275,691 ft. Drilling Company: Holt Services Rod Diam.: 4-inch  
 Vert. Datum: NAVD88 Station: ~ N/A Drill Rig Equipment: Terra Sonic 150 C.C. Hammer Type: \_\_\_\_\_  
 Horiz. Datum WA State Plane N Offset: ~ N/A Other Comments: No water/fluid added



**LEGEND**

- \* Sample Not Recovered
- ☐ Soil Core (as in Sonic Core Borings)
- ☐ Well Screen and Sand Filter
- ☐ Bentonite-Cement Grout
- ☐ Bentonite Chips/Pellets
- ☐ Bentonite Grout
- ▽ Ground Water Level ATD
- ▼ Ground Water Level in Well

**NOTES**

1. Refer to KEY for explanation of symbols, codes, abbreviations, and definitions.
2. Groundwater level, if indicated above, is for the date specified and may vary.
3. USCS designation is based on visual-manual classification and selected lab testing.
4. Ecology Well Tag: BNL 558.

FL358 Monitoring Wells  
Federal Way, Washington

**LOG OF BORING FL358-MW-13**

October 2022

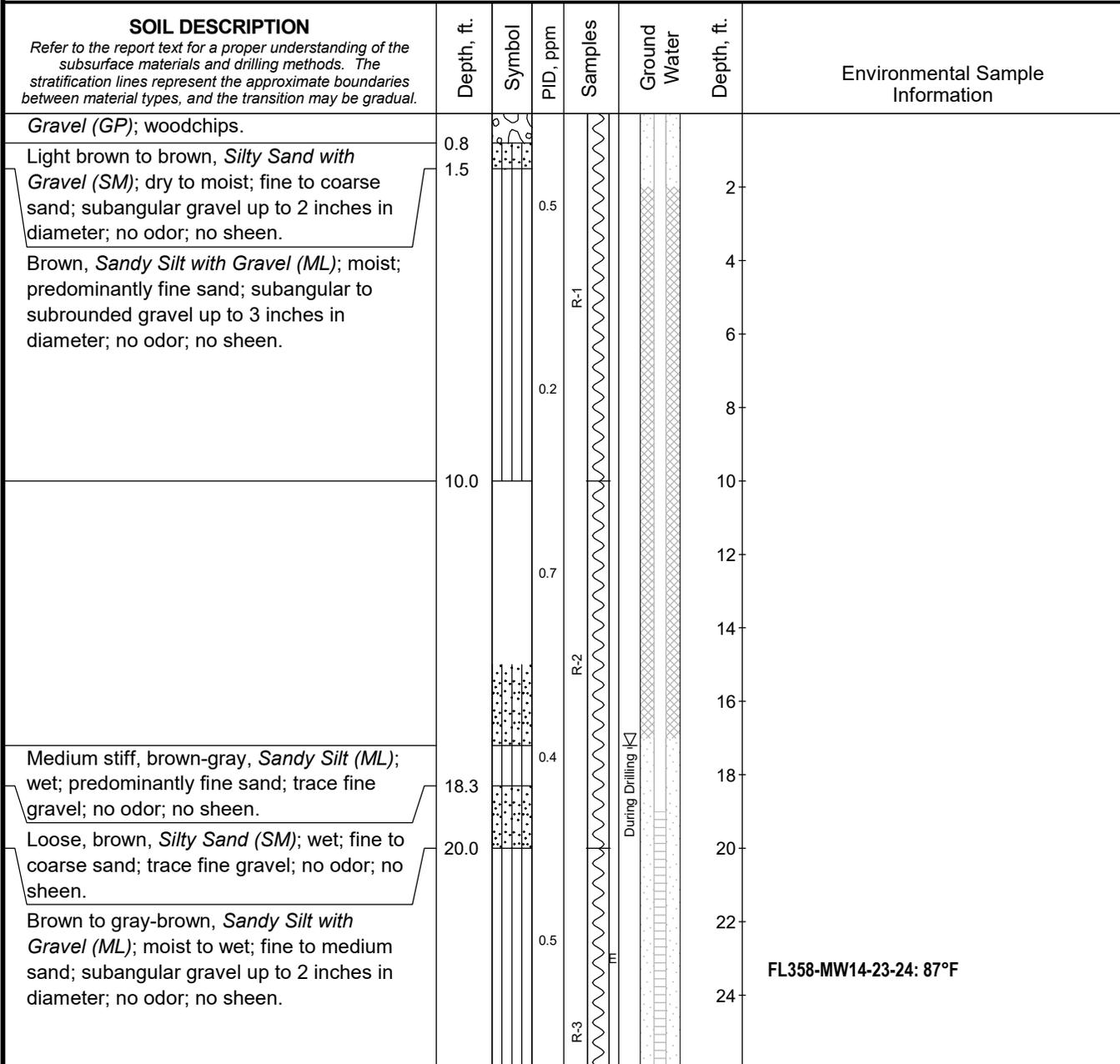
105474-050

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Geotechnical and Environmental Consultants

Sheet 2 of 2

MASTER LOG E-ENV - NOT PLOT 105474-050.GPJ SHAN\_WIL\_GB@sgc.com 10/22 Rev: JXS Typ: LKN

Total Depth: 40 ft. Northing: ~ 119,054 ft. Drilling Method: Sonic Core Hole Diam.: 6 in.  
 Top Elevation: ~ 434.4 ft. Easting: ~ 1,275,704 ft. Drilling Company: Holt Services Rod Diam.: 4-inch  
 Vert. Datum: NAVD88 Station: ~ N/A Drill Rig Equipment: Terra Sonic 150 C.C. Hammer Type: \_\_\_\_\_  
 Horiz. Datum WA State Plane N Offset: ~ N/A Other Comments: No water/fluid added



CONTINUED NEXT SHEET

LEGEND

- \* Sample Not Recovered
- E Environmental Sample Obtained
- Soil Core (as in Sonic Core Borings)
- Well Screen and Sand Filter
- Bentonite-Cement Grout
- Bentonite Chips/Pellets
- Bentonite Grout
- Ground Water Level ATD

NOTES

1. Refer to KEY for explanation of symbols, codes, abbreviations, and definitions.
2. Groundwater level, if indicated above, is for the date specified and may vary.
3. USCS designation is based on visual-manual classification and selected lab testing.
4. Ecology Well Tag: BNL 558.

FL358 Monitoring Wells  
Federal Way, Washington

LOG OF BORING FL358-MW14

October 2022

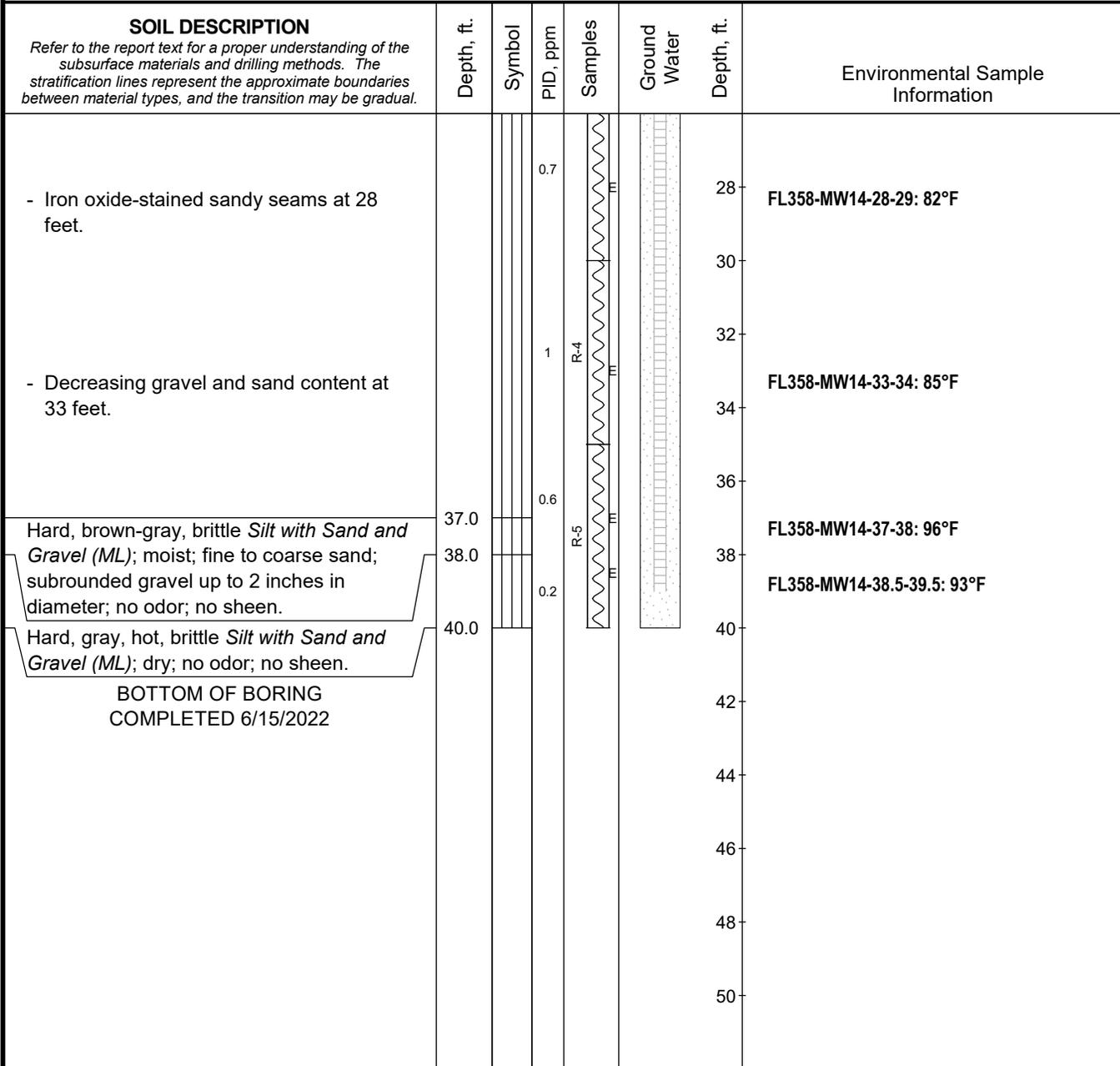
105474-050

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Sheet 1 of 2

MASTER LOG E-ENV - NOT PLOT 105474-050.GPJ SHAN\_WIL\_G090908/22 Rev: JXS Typ: LKN

Total Depth: 40 ft. Northing: ~ 119,054 ft. Drilling Method: Sonic Core Hole Diam.: 6 in.  
 Top Elevation: ~ 434.4 ft. Easting: ~ 1,275,704 ft. Drilling Company: Holt Services Rod Diam.: 4-inch  
 Vert. Datum: NAVD88 Station: ~ N/A Drill Rig Equipment: Terra Sonic 150 C.C. Hammer Type: \_\_\_\_\_  
 Horiz. Datum: WA State Plane N Offset: ~ N/A Other Comments: No water/fluid added



**LEGEND**

- \* Sample Not Recovered
- E Environmental Sample Obtained
- Soil Core (as in Sonic Core Borings)
- Well Screen and Sand Filter
- Bentonite-Cement Grout
- Bentonite Chips/Pellets
- Bentonite Grout
- Ground Water Level ATD

**NOTES**

- Refer to KEY for explanation of symbols, codes, abbreviations, and definitions.
- Groundwater level, if indicated above, is for the date specified and may vary.
- USCS designation is based on visual-manual classification and selected lab testing.
- Ecology Well Tag: BNL 558.

FL358 Monitoring Wells  
Federal Way, Washington

**LOG OF BORING FL358-MW14**

October 2022

105474-050

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Sheet 2 of 2

MASTER LOG E-ENV - NOT PLOT 105474-050.GPJ SHAN\_WIL\_GB@sgg.com 10/22 Rev: JXS Typ: LKN

**APPENDIX A**  
**SUBSURFACE EXPLORATION BORING LOGS**

Elevation reference: Ground surface elevation:		Well completed: Casing elevation:					AS-BUILT DESIGN	Page 1 of 1
DEPTH (feet)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NUMBER	BLOW COUNTS	OVM READING	GROUND WATER	TESTING	
0								
5	Medlum, moist, dark gray SILT, some sand and gravel		S-1	42	338			
10	Very dense, wet to saturated, gray SAND, some silt, trace gravel		S-2	76			8240	
15	Very dense, wet to saturated, gray SAND, some silt, trace gravel		S-3	51			8240	
20	Very dense, saturated, gray SAND, some silt		S-4	50/ 2"			8240	
	Bottom of boring at 20 feet.							
25								
30								

 2-inch O.D. split-spoon sample  
 Observed groundwater level  
 ATD = at time of drilling

LEGEND

\* Note: Soil log classification based on correlations with nearby borings

8240 EPA Method 8240 Analysis

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Kirkland, Washington 98034-6918

Elevation reference: Ground surface elevation:		Well completed: Casing elevation:					AS-BUILT DESIGN		Page 1 of 1
DEPTH (feet)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NUMBER	BLOW COUNTS	OVM READING	GROUND WATER	TESTING		
0									
5	Medium, damp to moist, dark gray SILT, some sand and gravel with abundant organic material and peat		S-1	32	251			8240	
10	As above, small sample volume obtained		S-2	53	750			8240	
15	Medium, wet to saturated, SAND with silt and gravel		S-3	31	957			8240	
20	Medium, wet to saturated, SAND with silt and gravel  Bottom of boring at 20 feet.		S-4	38	1721			8240	
25									
30									

\* Note: Monitoring well MW-1 was subsequently abandoned to 8 feet on 8-28-92, due to fact that well was separated at screen/pvc interface  
See log B1.VP-6 for construction details of vapor point which was installed in the former boring to 8 foot depth.

**LEGEND**

- 2-inch O.D. split-spoon sample
- Observed groundwater level
- ATD = at time of drilling
- EPA Method 8240 Analysis

\* Note: Soil log classification based on correlations with nearby borings

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Kirkland, Washington 98034-6918

Elevation reference: Ground surface elevation:		Well completed: Casing elevation:						VAPOR POINT AS-BUILT DESIGN	Page 1 of 1
DEPTH (feet)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NUMBER	BLOW COUNTS	M-TIP HNU	GROUND WATER		TESTING	
0	See BW-2,MW-1 for soil description								
5									
10	Bottom of boring at 8.0 feet.								
15									
20									
25									
30									

Note: Formerly BW-2.MW-1

LEGEND

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Elevation reference:		Well completed:					AS-BUILT DESIGN	Page 1 of 1
Ground surface elevation:		Casing elevation:						TESTING
DEPTH (feet)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NUMBER	BLOW COUNTS	OVM READING	GROUND WATER		
0								
5	Very dense, moist, gray SILT, some organic material		S-1	73			8240	
10	Very dense, moist, gray SILT, with clay		S-2	98			8240	
15	Very dense, wet to saturated, gray SILT, some sand and gravel  Bottom of boring at 15 feet.		S-3				8240	
20								
25								
30								

LEGEND

 2-inch O.D. split-spoon sample

 Observed groundwater level  
ATD = at time of drilling

 EPA Method 8240 Analysis

\* Note: Soil log classification based on correlations with nearby borings

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Elevation reference:		Well completed:		AS-BUILT DESIGN			Page 1 of 1
Ground surface elevation:		Casing elevation:					
DEPTH (feet)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NUMBER	BLOW COUNTS	OVM READING	GROUND WATER	TESTING
0							
5	Medium dense, moist, dark gray SILT, some sand with organics		S-1	47			8240
10	Medium dense, moist, dark gray SILT		S-2	30			8240
15	Very dense, saturated, dark gray SILT  Bottom of boring at 15 feet.		S-3	56			8240
20							
25							
30							

LEGEND

-  2-inch O.D. split-spoon sample
-  Observed groundwater level
- ATD = at time of drilling

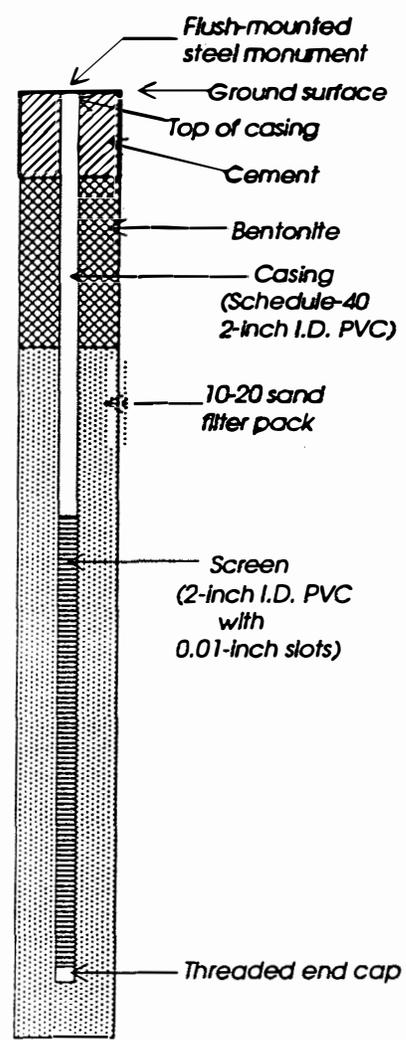
\* Note: Soil log classification based on correlations with nearby borings

 EPA Method 8240 Analysis

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Elevation reference: Ground surface elevation:		Well completed: Casing elevation:		AS-BUILT DESIGN			Page 1 of 1
DEPTH (feet)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NUMBER	BLOW COUNTS	M-TIP HNU	GROUND WATER	TESTING
0							
	Medium, wet, dark gray SILT, some SAND and gravel.		S-1	29	0.2.5		
5	Medium, damp to moist, dark gray SILT, some sand and gravel.		S-2	28	0.2.2		
	Medium, damp, dark gray SILT, some sand and gravel		S-3	24	0.1.8		
10	Loose, wet to saturated, coarse SAND, some silt, trace gravel.		S-4	7	0.3.3		
	Dense, damp, gray SILT, some sand and gravel.		S-5	42	0.2.3	ATD	8240
15	Stiff, wet to saturated, gray SILT, some sand and gravel.		S-6	31	0.2.2		
	Stiff, wet to saturated, brown SILT, some sand.		S-7	15	0.2.2		
20	Dense, saturated, gray SAND, some gravel.		S-8	38	0.2.2		8240
	Bottom of boring at 20 feet.						
25							
30							



LEGEND

2-inch O.D. split-spoon sample

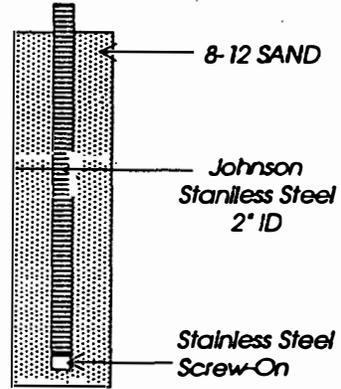
Observed groundwater level  
ATD = at time of drilling

8240 EPA Method 8240 Analysis

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Elevation reference: Ground surface elevation:		Well completed: Casing elevation:		VAPOR POINT AS-BUILT DESIGN			Page 1 of 1
DEPTH (feet)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NUMBER	BLOW COUNTS	M-TIP HNU	GROUND WATER	TESTING
0							
	Medium dense, brown SILT with gravel.	X	S-1	27			
5	Medium dense, moist, gray SAND, some silt and gravel, peat, wood material 3' thick		S-2	22	3.65.2		8240
	Medium dense, wet to saturated, brown SILT with sand, trace gravel		S-3	30	0.0.1.8		8240
10	Bottom of boring at 7.5 feet.						
15							
20							
25							
30							



LEGEND

I 2-inch O.D. split spoon sample

8240 EPA Method 8240 Analysis

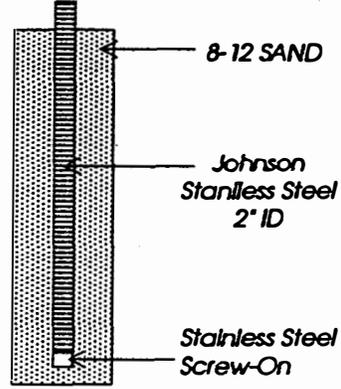
X Sample not recovered

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Elevation reference: Well completed: VAPOR POINT AS-BUILT DESIGN Page 1 of 1  
 Ground surface elevation: Casing elevation:

DEPTH (feet)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NUMBER	BLOW COUNTS	M-TIP HNU	GROUND WATER	TESTING
0							
	Very dense, moist, gray GRAVEL with sand and silt.		S-1	73	79.0,24.0		
5	Very dense, moist, gray, SILT, with sand and trace of gravel.		S-2	50	38.0,8.0		8240
	Very dense, dry, gray, SILT, with sand and gravel.		S-3	50	25.3,7		8240
10	Bottom of boring at 7.5 feet.						
15							
20							
25							
30							



LEGEND

I 2-inch O.D. split- spoon sample

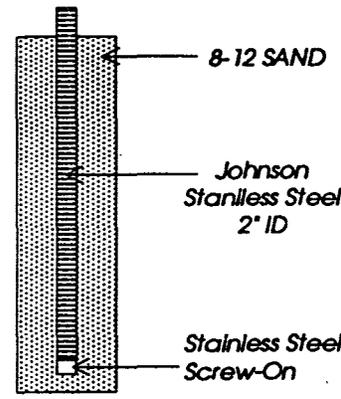
8240 EPA Method 8240 Analysis

X Sample not recovered

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Elevation reference: Ground surface elevation:		Well completed: Casing elevation:					VAPOR POINT AS-BUILT DESIGN	Page 1 of 1
DEPTH (feet)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NUMBER	BLOW COUNTS	M-TIP HNH	GROUND WATER	TESTING	
0								
	Very dense, moist to wet, gray SAND some silt and gravel		S-1	58	22.4.1			
5	Dense, dry, dark gray to black SAND some silt and gravel. Peat and woody fragments abundant		S-2	31	16.7.4.1		8240	
	Stiff, damp, gray, silt.		S-3	47	0.2.1		8240	
10	Bottom of boring at 7.5 feet.							
15								
20								
25								
30								



LEGEND

I 2-inch O.D.  
split- spoon sample

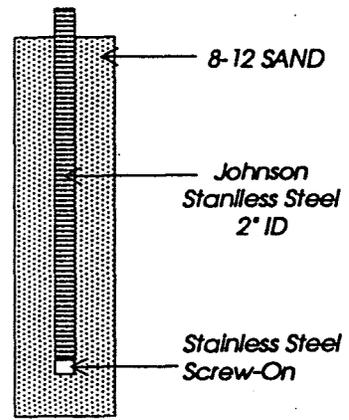
8240 EPA Method 8240 Analysis

X Sample not recovered

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Elevation reference: Ground surface elevation:		Well completed: Casing elevation:		VAPOR POINT AS-BUILT DESIGN			Page 1 of 1
DEPTH (feet)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NUMBER	BLOW COUNTS	M-TIP HNU	GROUND WATER	TESTING
0							
	Dense, damp, bark gray SAND some silt and gravel.	I	S-1	45	11.0.3.0		
5	Loose to medlum, damp, bark gray SAND, some gravel, abundant wood material.	I	S-2	14	4.0.2.4		8240
	Medium, damp, gray SAND, some silt and gravel.	I	S-3	27	6.8.2.4		8240
10	Bottom of boring at 8 feet.						
15							
20							
25							
30							



LEGEND

I 2-inch O.D. split-spoon sample

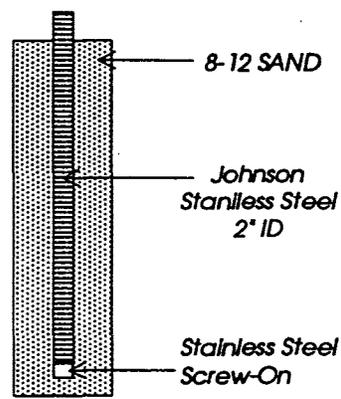
8240 EPA Method 8240 Analysis

X Sample not recovered

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Elevation reference: Ground surface elevation:		Well completed: Casing elevation:					VAPOR POINT AS-BUILT DESIGN	Page 1 of 1
DEPTH (feet)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NUMBER	BLOW COUNTS	M-TIP HNU	GROUND WATER	TESTING	
0								
	Very dense, moist, gray GRAVEL some silt and sand.		S-1	72	240.131			
5	Very dense, moist, gray GRAVEL some silt and sand.		S-2	51	425.130		8240	
	Very dense, moist, gray SILT some silt and gravel.		S-3	50	68.22		8240	
10	Bottom of boring at 7.5 feet.							
15								
20								
25								
30								



LEGEND

I 2-inch O.D. split-spoon sample

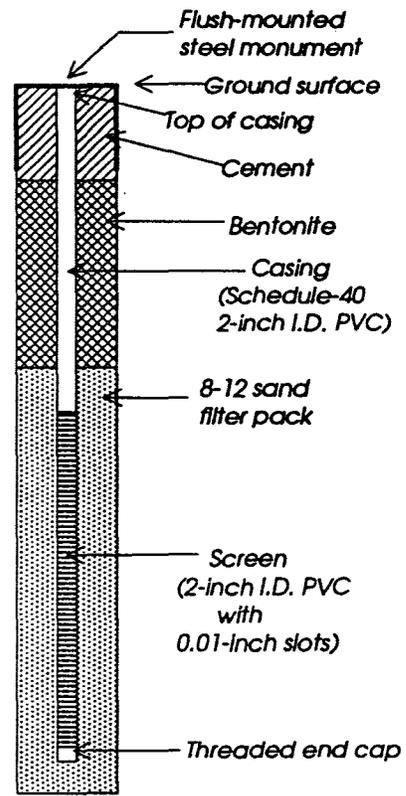
8240 EPA Method 8240 Analysis

X Sample not recovered

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Elevation reference:		Well completed:					AS-BUILT DESIGN	Page 1 of 1
Ground surface elevation:		Casing elevation:						TESTING
DEPTH (feet)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NUMBER	BLOW COUNTS	HNU	GROUND WATER		
0								
	Medium, wet, gray SAND, some silt and gravel (Fill)		S-1	14	2.8			
5	Loose, wet, gray, SAND, with gravel and silt (Fill)		S-2	4	3.0			
	Very dense, wet then dry, gray-black SAND, Abundant organic matter (Weathered Till)		S-3	51	3.9		8240	
10	Stiff, wet, gray, SILT, some gravel (Weathered Till)		S-4	12	4.0			
	Medium, saturated, gray-brown SAND, some gravel		S-5	23	4.2	ATD	8240	
15	Medium, saturated, gray-brown SAND with gravel		S-6	30	4.2		8240	
	Bottom of boring at 15 feet.							
20								
25								
30								



LEGEND

I 2-inch O.D. split-spoon sample

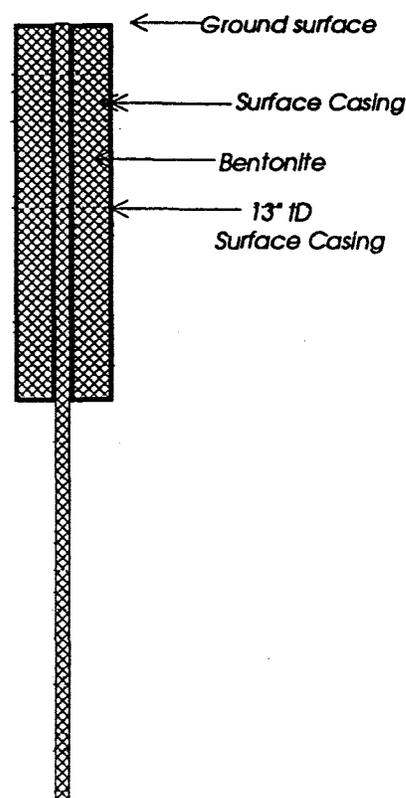
▼ Observed groundwater level  
ATD = at time of drilling

8240 EPA Method 8240 Analysis

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Elevation reference: Ground surface elevation:		Well completed: Casing elevation:					AS-BUILT DESIGN SURFACE CASED BORING		Page 1 of 1
DEPTH (feet)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NUMBER	BLOW COUNTS	HNU	GROUND WATER		TESTING	
0									
	Moist, gray, brown SAND with silt		S-1	N/A	450.0			8240	
5	Very dense, moist, gray SAND, with silt, some organic matter		S-2	52	250.0			8240	
	Hard, moist to wet, gray SILT, some gravel		S-3	66	4.0			8240	
10	As above		S-3b	50	4.0			8240	
	Hard, saturated, orange-brown SILT with sand and gravel		S-4	50	4.1	 ATD		8240	
15			S-5	65	2.3				
	Bottom of boring at 16.5 feet.								
20									
25									
30									



Note: Boring B-12 was advanced to 16.5 feet through a 13-inch ID surface casing which was advanced to approximately 6.5 feet

Boring B-12 was abandoned from 0 feet to 16.5' with bentonite slurry.

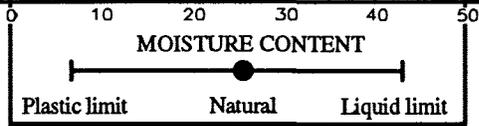
LEGEND

-  2-inch O.D. split-spoon sample
-  Grab sample
-  Reported as 'S-36' by Analytical Testing Lab
-  Observed groundwater level
- ATD = at time of drilling
-  EPA Method 8240 Analysis

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DEPTH (feet)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NUMBER	OVM READING	STANDARD PENETRATION RESISTANCE					Page 1 of 1	
					Blows per foot					TESTING	
0	Approximate ground surface elevation: <i>Unknown</i>				0	10	20	30	40	50	
	<i>6" Concrete</i>										
	<i>Dense, moist, brown, gravelly SAND (Fill)</i>										
5											
	<i>Dense, moist, gray brown, silty SAND</i>		<i>S-1</i>	<i>0.0</i>							<i>8010</i>
10	<i>Boring terminated at approximately 8 feet</i>										
15											
20											
25											
30											



LEGEND

I 2-inch OD split-spoon sample

*8010* Analytical testing

**AGRA**  
**Earth & Environmental**  
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 Kirkland, Washington 98034-6918

AGRA Earth and Environmental, Inc.

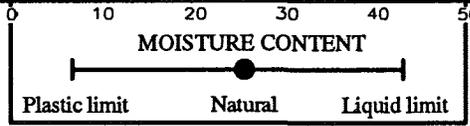


DEPTH (feet)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NUMBER	OVM READING	STANDARD PENETRATION RESISTANCE					Page 1 of 1	
					Blows per foot					TESTING	
0	Approximate ground surface elevation: <i>Unknown</i>				0	10	20	30	40	50	
	6" Concrete										
	Dense, moist, brown, gravelly SAND (Fill)										
5	Very dense, moist, brown, silty SAND		S-1	0.0							
											Blowcount Oversated 50/6'
											8010
	Boring terminated at approximately 6.5 feet										
											Boring abandoned with bentonite chip and concrete plug.
10											
15											
20											
25											
30											

LEGEND

 2-inch OD split-spoon sample

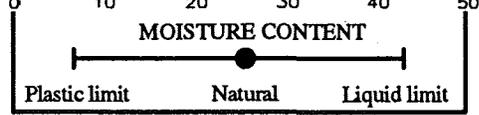
 Analytical testing



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**Earth & Environmental**  
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 Kirkland, Washington 98034-6918

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DEPTH (feet)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NUMBER	OVM READING	STANDARD PENETRATION RESISTANCE					Page 1 of 1	
					Blows per foot					TESTING	
0	Approximate ground surface elevation: <i>Unknown</i>				0	10	20	30	40	50	
	<i>10" Concrete</i>										
	<i>Dense, moist, brown, gravelly SAND (Fill)</i>										
5	<i>Dense, moist, brown, silty SAND with some organics</i>		<i>S-1</i>	<i>1100</i>							<i>8010</i>
	<i>Boring terminated at approximately 6.5 feet</i>										
10											
15											
20											
25											
30											



LEGEND

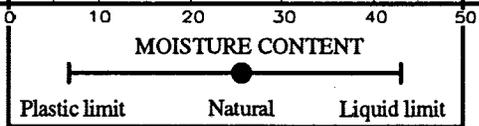
2-inch OD split-spoon sample

Analytical testing

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**Earth & Environmental**  
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DEPTH (feet)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NUMBER	OVM READING	STANDARD PENETRATION RESISTANCE					Page 1 of 1	
					Blows per foot					TESTING	
0	Approximate ground surface elevation: <i>Unknown</i>				0	10	20	30	40	50	
	6" Concrete										
	Dense, moist, brown, gravelly SAND (Fill)										
5											
	Dense, moist, gray brown, silty SAND with organics		S-1	0.0							8010
10	Boring terminated at approximately 8 feet										
15											
20											
25											
30											



LEGEND

2-inch OD split-spoon sample

Analytical testing

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DEPTH (feet)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NUMBER	OVM READING	STANDARD PENETRATION RESISTANCE					Page 1 of 1	
					Blows per foot						TESTING
0	Approximate ground surface elevation: <i>Unknown</i> <i>4" Concrete</i> <i>Dense, moist, brown, gravelly SAND (Fill)</i>				0	10	20	30	40	50	
5	<i>Dense, moist, brown, silty SAND with some organics</i>		<i>S-1</i>	<i>0.0</i>							<b>8010</b>
6.5	<i>Boring terminated at approximately 6.5 feet</i>					<i>Boring abandoned with bentonite chip and concrete plug.</i>					
10											
15											
20											
25											
30											

**LEGEND**

 2-inch OD split-spoon sample

**8010** Analytical testing



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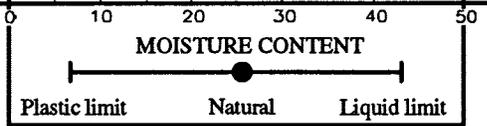
PROJECT: Y-Pay-More Dry Cleaners w.o. 11-07883-11

DEPTH (feet)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NUMBER	OVM READING	STANDARD PENETRATION RESISTANCE					Page 1 of 1	
					Blows per foot					TESTING	
0	Approximate ground surface elevation: <i>Unknown</i> 7' Concrete Dense, moist, brown, gravelly SAND (Fill)				0	10	20	30	40	50	
5	Dense, moist, brown, silty SAND with some organics		S-1	0.0							8010
6.5	Boring terminated at approximately 6.5 feet				Boring abandoned with bentonite chip and concrete plug.						
10											
15											
20											
25											
30											

LEGEND

 2-inch OD split-spoon sample

 Analytical testing



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11335 NE 122nd Way, Suite 100  
Kirkland, Washington 98034-6918

AGRA Earth and Environmental, Inc.

# APPENDIX A

## FIELD PROCEDURES AND BORING LOGS

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### Underground Utility Locate

Prior to drilling activities, an underground utility locate was conducted in the areas of the proposed boring locations to identify subsurface utilities and/or potential underground physical hazards. The underground utility check consisted of contacting a local utility alert service (one-call) and hiring a private utility locating service.

### Soil Sampling

The direct-push explorations were completed using direct-push drilling equipment. Soil samples were obtained using a 5-foot-long core sampler. The sampler was driven into the soil using a pneumatic hammer. Upon retrieval, the sampler was opened and a GeoEngineers representative examined the soil and performed field screening tests. The boring logs are presented in Figures A-2 through A-11. Selected photographs taken during the Phase II ESA drilling are presented as Figures A-12 through A-17.

Selected soil samples were obtained in glass jars (supplied by the analytical laboratory), labeled and stored in a cooler with ice pending delivery to the laboratory. VOC samples were collected first, directly from the sample sleeve using the 5035A sampling method. Following the VOC sample collection, the remaining soil was placed in sample containers provided by the analytical laboratory. All sampling equipment was decontaminated between samples using a Liqui-Nox® wash solution and distilled water rinse.

Soil samples obtained from the explorations were collected from the sampler with a stainless-steel knife, a stainless-steel trowel and/or new gloves. A portion of each sample was placed in laboratory-prepared sample jars for possible chemical analysis. The remaining portion of each sample was used for field screening.

The samples collected from the borings were identified using the following identification system: FL358-B1-3.5-4.5, where FL358 is the identified Federal Way Link Extension parcel(s) on which or adjacent to which the boring was located, B1 is the boring number and the approximate depth at which the sample was obtained (e.g., FL358-B1-3.5-4.5 was collected from the FL358 parcel at boring B1 at a depth of approximately 3.5 to 4.5 feet bgs).

Selected samples from the explorations were submitted for chemical analysis based on field screening results. The soil samples were placed in a cooler with ice for transport to the laboratory. Standard chain-of-custody procedures were followed in transporting the soil samples to the laboratory. Drill cuttings were placed in drums pending disposal.

## Field Screening of Soil Samples

Soil samples obtained from the borings were screened in the field for evidence of contamination using: 1) visual examination; 2) sheen screening and 3) vapor headspace screening with a photo-ionization detector (PID). The results of headspace and sheen screening are included in the boring logs.

Visual screening consists of inspecting the soil for stains indicative of petroleum-related contamination. Visual screening is generally more effective when contamination is related to heavy petroleum hydrocarbons, such as motor oil or hydraulic oil, or when hydrocarbon concentrations are high. Sheen screening and headspace vapor screening are more sensitive methods that have been effective in detecting contamination at concentrations less than regulatory cleanup guidelines. Sheen screening involves placing soil in a pan of water and observing the water surface for signs of sheen. Sheen classifications are as follows:

No Sheen (NS)	No visible sheen on water surface.
Slight Sheen (SS)	Light, colorless, dull sheen; spread is irregular, not rapid; sheen dissipates rapidly.
Moderate Sheen (MS)	Light to heavy sheen, may have some color/iridescence; spread is irregular to flowing; few remaining areas of no sheen on water surface.
Heavy Sheen (HS)	Heavy sheen with color/iridescence; spread is rapid; entire water surface may be covered with sheen.

Headspace vapor screening involves placing a soil sample in a plastic sample bag. Air is captured in the bag and the bag is shaken to expose the soil to the air trapped in the bag. The probe of a PID is inserted in the bag and the instrument measures the concentration of combustible vapor in the air removed from the sample headspace. The PID measures concentrations in ppm (parts per million) and is calibrated to isobutylene. The PID is designed to quantify combustible gas and organic vapor concentrations up to 2,500 ppm. A lower threshold of significance of 1 ppm was used in this application. Field screening results are site-specific and vary with soil type, soil moisture content, temperature and type of contaminant.

## Groundwater Sampling Direct-Push Borings

Grab groundwater samples were obtained from direct-push borings for chemical analysis. Temporary drill casing and well screen were left in place in each boring to collect a groundwater sample. Groundwater was purged from each temporary sampling point using a peristaltic pump and disposable tubing until water from boring was clear. After well purging, the groundwater sample was collected in laboratory-prepared containers. The groundwater sample was then

placed in a cooler with ice and logged on the chain-of-custody record. Purge water was stored in a labeled drum at the site.

The temporary casing and well screen were removed from the boring and the boring location abandoned in accordance with Washington State regulations.

### **Monitoring Wells**

Groundwater samples were obtained from newly installed and existing monitoring wells using low-flow/low-turbidity sampling techniques to minimize the suspension of particulates in the samples. Groundwater samples were obtained from the monitoring wells using a peristaltic pump with disposable tubing. Groundwater was pumped at approximately 0.5 liters per minute from the approximate midpoint of the screened interval. A water quality measuring system with a flow-through-cell was used to monitor the following water quality parameters during purging: electrical conductivity, dissolved oxygen, pH, turbidity, oxidation-reduction potential and temperature. Ambient groundwater conditions were assumed to have been reached once these parameters varied by less than 10 percent on three consecutive measurements. All field measurements were documented on the field logs.

After well purging, the flow-through-cell was disconnected and the groundwater sample was collected in laboratory-prepared containers. The groundwater sample was placed in a cooler with ice and logged on the chain-of-custody record. Purge water was stored in a labeled drum at the site.

## SOIL CLASSIFICATION CHART

MAJOR DIVISIONS			SYMBOLS		TYPICAL DESCRIPTIONS
			GRAPH	LETTER	
COARSE GRAINED SOILS	GRAVEL AND GRAVELLY SOILS	CLEAN GRAVELS <small>(LITTLE OR NO FINES)</small>		<b>GW</b>	WELL-GRADED GRAVELS, GRAVEL - SAND MIXTURES
		GRAVELS WITH FINES <small>(APPRECIABLE AMOUNT OF FINES)</small>		<b>GP</b>	POORLY-GRADED GRAVELS, GRAVEL - SAND MIXTURES
		GRAVELS WITH FINES <small>(APPRECIABLE AMOUNT OF FINES)</small>		<b>GM</b>	SILTY GRAVELS, GRAVEL - SAND - SILT MIXTURES
	SAND AND SANDY SOILS	CLEAN SANDS <small>(LITTLE OR NO FINES)</small>		<b>SW</b>	WELL-GRADED SANDS, GRAVELLY SANDS
		SANDS WITH FINES <small>(APPRECIABLE AMOUNT OF FINES)</small>		<b>SP</b>	POORLY-GRADED SANDS, GRAVELLY SAND
		SANDS WITH FINES <small>(APPRECIABLE AMOUNT OF FINES)</small>		<b>SM</b>	SILTY SANDS, SAND - SILT MIXTURES
FINE GRAINED SOILS	SILTS AND CLAYS	LIQUID LIMIT LESS THAN 50		<b>ML</b>	INORGANIC SILTS, ROCK FLOUR, CLAYEY SILTS WITH SLIGHT PLASTICITY
		LIQUID LIMIT LESS THAN 50		<b>CL</b>	INORGANIC CLAYS OF LOW TO MEDIUM PLASTICITY, GRAVELLY CLAYS, SANDY CLAYS, SILTY CLAYS, LEAN CLAYS
		LIQUID LIMIT LESS THAN 50		<b>OL</b>	ORGANIC SILTS AND ORGANIC SILTY CLAYS OF LOW PLASTICITY
	SILTS AND CLAYS	LIQUID LIMIT GREATER THAN 50		<b>MH</b>	INORGANIC SILTS, MICACEOUS OR DIATOMACEOUS SILTY SOILS
		LIQUID LIMIT GREATER THAN 50		<b>CH</b>	INORGANIC CLAYS OF HIGH PLASTICITY
		LIQUID LIMIT GREATER THAN 50		<b>OH</b>	ORGANIC CLAYS AND SILTS OF MEDIUM TO HIGH PLASTICITY
HIGHLY ORGANIC SOILS				<b>PT</b>	PEAT, HUMUS, SWAMP SOILS WITH HIGH ORGANIC CONTENTS

NOTE: Multiple symbols are used to indicate borderline or dual soil classifications

### Sampler Symbol Descriptions

	2.4-inch I.D. split barrel
	Standard Penetration Test (SPT)
	Shelby tube
	Piston
	Direct-Push
	Bulk or grab
	Continuous Coring

Blowcount is recorded for driven samplers as the number of blows required to advance sampler 12 inches (or distance noted). See exploration log for hammer weight and drop.

"P" indicates sampler pushed using the weight of the drill rig.

"WOH" indicates sampler pushed using the weight of the hammer.

NOTE: The reader must refer to the discussion in the report text and the logs of explorations for a proper understanding of subsurface conditions. Descriptions on the logs apply only at the specific exploration locations and at the time the explorations were made; they are not warranted to be representative of subsurface conditions at other locations or times.

## ADDITIONAL MATERIAL SYMBOLS

SYMBOLS		TYPICAL DESCRIPTIONS
GRAPH	LETTER	
	<b>AC</b>	Asphalt Concrete
	<b>CC</b>	Cement Concrete
	<b>CR</b>	Crushed Rock/ Quarry Spalls
	<b>SOD</b>	Sod/Forest Duff
	<b>TS</b>	Topsoil

### Groundwater Contact



Measured groundwater level in exploration, well, or piezometer



Measured free product in well or piezometer

### Graphic Log Contact

Distinct contact between soil strata

Approximate contact between soil strata

### Material Description Contact

Contact between geologic units

Contact between soil of the same geologic unit

### Laboratory / Field Tests

%F	Percent fines
%G	Percent gravel
AL	Atterberg limits
CA	Chemical analysis
CP	Laboratory compaction test
CS	Consolidation test
DD	Dry density
DS	Direct shear
HA	Hydrometer analysis
MC	Moisture content
MD	Moisture content and dry density
Mohs	Mohs hardness scale
OC	Organic content
PM	Permeability or hydraulic conductivity
PI	Plasticity index
PP	Pocket penetrometer
SA	Sieve analysis
TX	Triaxial compression
UC	Unconfined compression
VS	Vane shear

### Sheen Classification

NS	No Visible Sheen
SS	Slight Sheen
MS	Moderate Sheen
HS	Heavy Sheen

## Key to Exploration Logs

Start Drilled	10/5/2017	End	10/5/2017	Total Depth (ft)	20	Logged By	PDR	Driller	Holt Services, Inc.	Drilling Method	Direct-Push	
Checked By						DLC						
Surface Elevation (ft)	423.5			Hammer Data				Drilling Equipment	Geoprobe 7800			
Vertical Datum	NAVD88											
Easting (X)	1275754.574			System Datum	WA State Plane North			See "Remarks" section for groundwater observed				
Northing (Y)	119162.3868						NAD83					
Notes: Surface elevations pending from Sound Transit												

Elevation (feet)	FIELD DATA					Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor (ppm)	REMARKS
	Depth (feet)	Interval Recovered (in)	Blows/foot	Collected Sample	Sample Name Testing						
0	30				FL358-B1-0-0.5 FL358-B1-0.5-1 CA	AC	Asphalt concrete pavement	NS	<1	Groundwater observed at approximately 10½ feet below ground surface during drilling	
						SM	Brown silty fine to coarse sand with fine to coarse gravel (moist)	NS	<1		
						SP-SM	Gray fine to coarse sand with silt and fine to coarse gravel (moist)	NS	<1		
						SM	Gray fine to coarse sand with silt and fine to coarse gravel (moist)	NS	<1		
						NR	Brown silty fine to coarse sand with occasional fine gravel (moist) No recovery				
4.20											
5	48				FL358-B1-5.6 CA	ML	Gray silt (moist)	NS	<1		
						SP-SM	Dark brown fine to coarse sand with silt and occasional fine gravel (moist)				
						ML	Brown silt with fine to medium sand and occasional fine gravel (moist)				
						NR	No recovery				
10	60				FL358-B1-10-11 CA	ML	Gray silt with fine sand (moist)	NS	<1		
						SM	Brown silty fine sand with occasional medium to coarse sand and fine gravel (wet)				
11.5											
15	60				FL358-B1-13-14 CA	SM	Grades to silty fine to coarse sand with fine to coarse gravel (wet)	NS	<1		
						SP-SM	Brown fine to coarse sand with silt and fine to coarse gravel (wet)				
						SP	Brown fine to coarse sand with fine to coarse gravel and trace silt (wet)	NS	<1		
14.0											
20					FL358-B1-19-20			NS	<1		
4.05											

Note: See Figure A-1 for explanation of symbols.

Coordinates Data Source: Horizontal approximated based on hand-held GPS, Vertical approximated based on Locational Survey by Lin & Associates

### Log of Direct-Push Boring FL358-B1



Project: Sound Transit - Federal Way Link Extension FL358\_361\_363  
 Project Location: 2200 S. 320th Street, Federal Way, Washington  
 Project Number: 4082-039-01

Figure A-2  
 Sheet 1 of 1

Date: 11/28/17 Path: W:\PROJECTS\4082039\GINT\408203901 ENV LOGS.GPJ DBLibrary\Library\GEOENGINEERS\_DF\_STD\_US\_JUNE\_2017.GLB\GEB\_ENVIRONMENTAL\_STANDARD\_NO\_GW

Start Drilled	10/5/2017	End	10/5/2017	Total Depth (ft)	20	Logged By	PDR	Driller	Holt Services, Inc.	Drilling Method	Direct-Push
Surface Elevation (ft)	425.6			Hammer Data				Drilling Equipment	Geoprobe 7800		
Vertical Datum	NAVD88			System Datum	WA State Plane North NAD83			See "Remarks" section for groundwater observed			
Easting (X)	1275737.855										
Northing (Y)	118914.2593										
Notes: Surface elevations pending from Sound Transit											

Elevation (feet)	FIELD DATA					Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor (ppm)	REMARKS
	Depth (feet)	Interval Recovered (in)	Blows/foot	Collected Sample	Sample Name Testing						
425	0	36			FL358-B3-0.0.5 FL358-B3-0.5-1	AC SM SP-SM ML	Asphalt concrete pavement Brown silty fine to coarse sand with occasional gravel (moist) Gray fine to coarse sand with silt and gravel (moist) Gray silt with sand (moist to wet)	NS NS	<1 <1		
						SM NR	Brown silty fine to coarse sand with gravel (moist) No recovery				
420	5	42			FL358-B3-5.6 CA	SP-SM SM	Brown fine to coarse sand with silt and gravel (moist) Gray silty fine to medium sand with gravel (moist to wet)	SS	<1		
					FL358-B3-7.8 CA	NR	Becomes brown with increased silt content No recovery	NS	<1		
415	10	36			FL358-B3-12-13 CA	SM SP MH SP-SM NR	Brown silty fine to coarse sand (moist to wet) Gray-brown fine to coarse sand with gravel (moist) Brown organic silt with sand (moist) Gray fine to coarse sand with silt and gravel (moist) No recovery	NS 2.9 NS	<1 15.7	Groundwater observed at approximately 10 feet below ground surface during drilling	
						SM NR	Gray silty fine sand with occasional gravel (moist) No recovery	NS NS	<1 1.3		
410	15	36			FL358-B3-16.5-17.5	SP-SM SM NR	Brown fine to coarse sand with silt and gravel (moist) Gray silty fine to medium sand with occasional gravel (moist to wet) No recovery	SS -	1.4 <1		
						NR	No recovery				
	20										

Note: See Figure A-1 for explanation of symbols.  
Coordinates Data Source: Horizontal approximated based on hand-held GPS, Vertical approximated based on Locational Survey by Lin & Associates

### Log of Direct-Push Boring FL358-B3

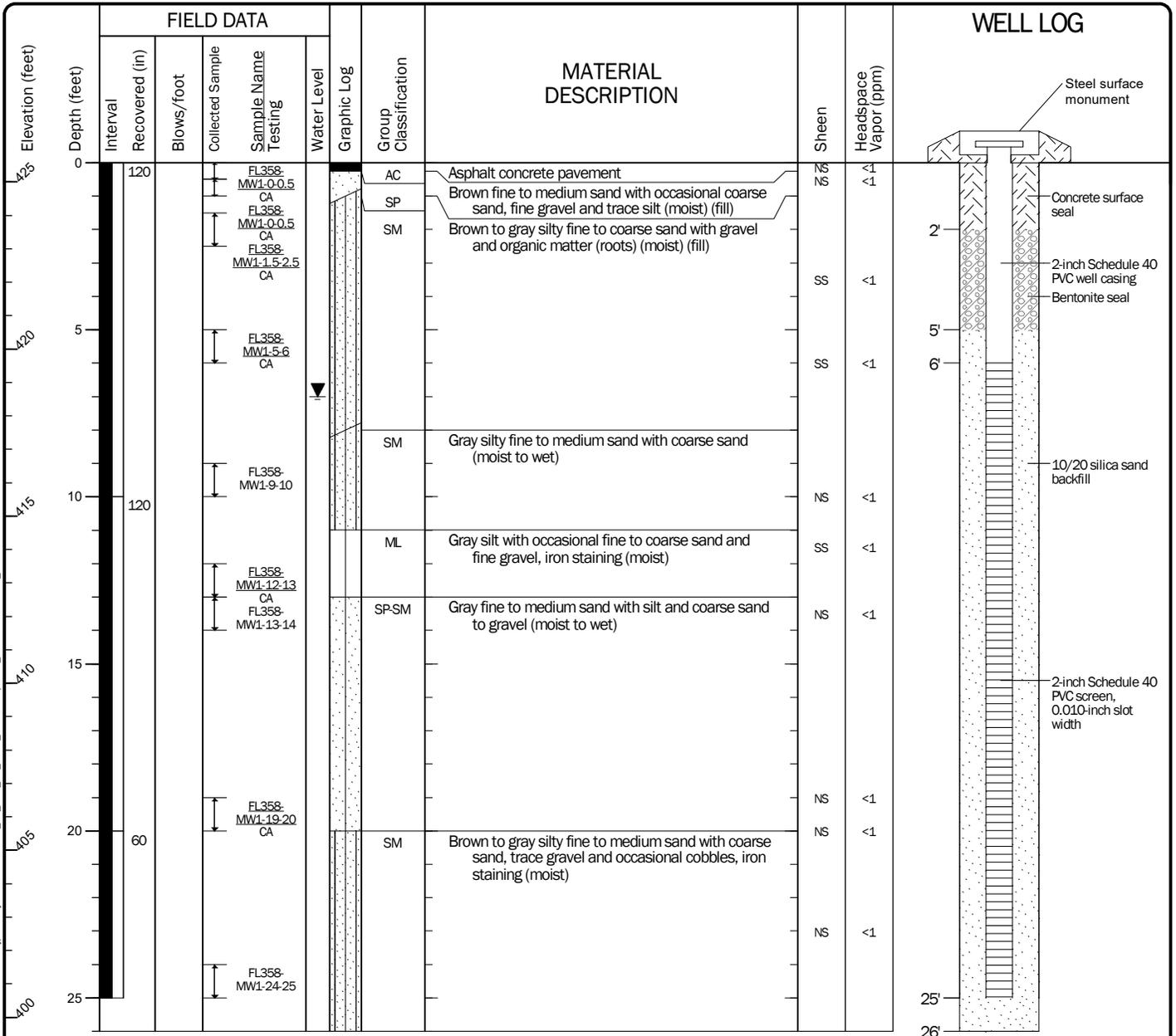


Project: Sound Transit - Federal Way Link Extension FL358\_361\_363  
Project Location: 2200 S. 320th Street, Federal Way, Washington  
Project Number: 4082-039-01

Figure A-3  
Sheet 1 of 1

Date: 11/28/17 Path: W:\PROJECTS\4082039\GINT\408203901 ENV LOGS.GPJ DBLibrary\Library\GEOENGINEERS\_DF\_STD\_US\_JUNE\_2017.GLB\GEB8\_ENVIRONMENTAL\_STANDARD\_NO\_GW

Start Drilled 10/2/2017	End 10/2/2017	Total Depth (ft) 26	Logged By Checked By DLC	Driller Holt Services, Inc.	Drilling Method Sonic
Hammer Data		Drilling Equipment Sonic Drill 1200 Terra Core		A 2 (in) well was installed on 10/2/2017 to a depth of 25 (ft).	
Surface Elevation (ft) Vertical Datum		425.58 NAVD88		Top of Casing Elevation (ft)	
Easting (X) Northing (Y)		1275784.189 119092.8266		Horizontal Datum WA State Plane North NAD83	
Groundwater Date Measured		10/6/2017		Depth to Water (ft) 7.00	
				Elevation (ft) 418.58	
Notes: Surface elevations pending from Sound Transit					



Note: See Figure A-1 for explanation of symbols.  
Coordinates Data Source: Horizontal approximated based on hand-held GPS, Vertical approximated based on Locational Survey by Lin & Associates

### Log of Monitoring Well FL358-MW1



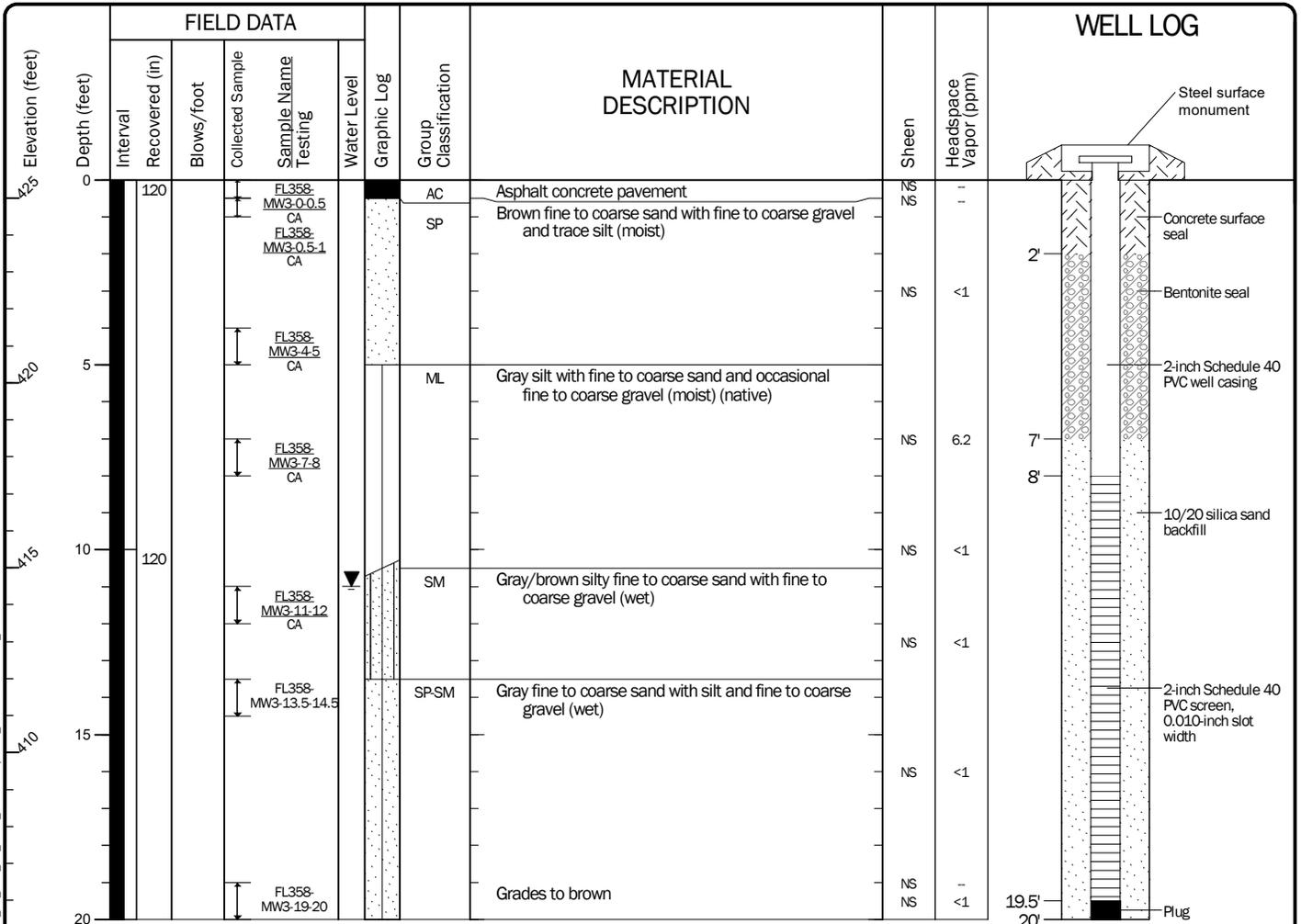
Project: Sound Transit - Federal Way Link Extension FL358\_361\_363  
Project Location: 2200 S. 320th Street, Federal Way, Washington  
Project Number: 4082-039-01

Figure A-4  
Sheet 1 of 1

Date: 11/28/17 Path: W:\PROJECTS\VA\4082039\GINT\4082039-01 ENV LOGS.GPJ DBLibrary\Library\GEOENGINEERS\_DF\_STD\_US\_JUNE\_2017.GLB\GEB8\_ENVIRONMENTAL\_WELL



Start Drilled 10/3/2017	End 10/3/2017	Total Depth (ft) 20	Logged By Checked By PDR DLC	Driller Holt Services, Inc.	Drilling Method Sonic
Hammer Data		Drilling Equipment Sonic Drill 1200 Terra Core			A 2 (in) well was installed on 10/3/2017 to a depth of 19.5 (ft).
Surface Elevation (ft) Vertical Datum NAVD88		Top of Casing Elevation (ft)			Groundwater Date Measured 10/3/2017
Easting (X) Northing (Y) 1275732.324 118973.0768		Horizontal Datum WA State Plane North NAD83			Depth to Water (ft) 11.00 Elevation (ft) 414.49
Notes: Surface elevations pending from Sound Transit					



Note: See Figure A-1 for explanation of symbols.  
Coordinates Data Source: Horizontal approximated based on hand-held GPS, Vertical approximated based on Locational Survey by Lin & Associates

### Log of Monitoring Well FL358-MW3

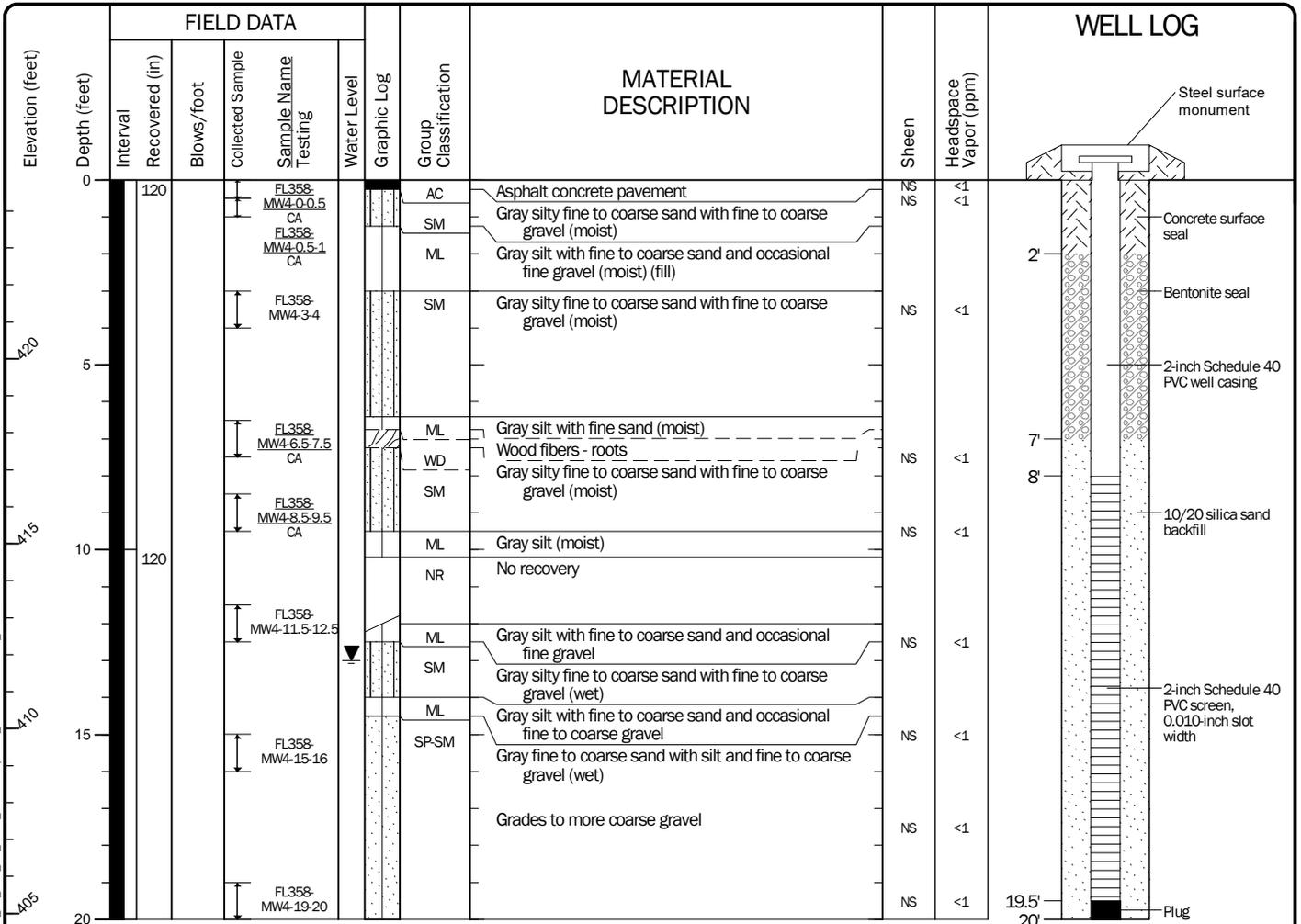


Project: Sound Transit - Federal Way Link Extension FL358\_361\_363  
Project Location: 2200 S. 320th Street, Federal Way, Washington  
Project Number: 4082-039-01

Figure A-6  
Sheet 1 of 1

Date: 11/28/17 Path: W:\PROJECTS\4082039\GINT\4082039\ENV LOGS.GPJ DBLibrary\Library\GEOENGINEERS\_DF\_STD\_US\_JUNE\_2017.GLB\GEB\_ENVIRONMENTAL\_WELL

Start Drilled 10/3/2017	End 10/3/2017	Total Depth (ft)	20	Logged By Checked By	PDR DLC	Driller Holt Services, Inc.	Drilling Method	Sonic
Hammer Data				Drilling Equipment			Sonic Drill 1200 Terra Core	
Surface Elevation (ft) Vertical Datum				424.84 NAVD88			A 2 (in) well was installed on 10/3/2017 to a depth of 19.5 (ft).	
Easting (X) Northing (Y)				1275650.153 118921.5743			Horizontal Datum	
				WA State Plane North NAD83			Groundwater Date Measured	
							10/3/2017	
							Depth to Water (ft)	
							13.00	
							Elevation (ft)	
							411.84	
Notes: Surface elevations pending from Sound Transit								



Note: See Figure A-1 for explanation of symbols.  
Coordinates Data Source: Horizontal approximated based on hand-held GPS, Vertical approximated based on Locational Survey by Lin & Associates

### Log of Monitoring Well FL358-MW4



Project: Sound Transit - Federal Way Link Extension FL358\_361\_363  
Project Location: 2200 S. 320th Street, Federal Way, Washington  
Project Number: 4082-039-01

Figure A-7  
Sheet 1 of 1

Date: 11/28/17 Path: W:\PROJECTS\4082039\GINT\408203901 ENV LOGS.GPJ DBLibrary\Library\GEOENGINEERS\_DF\_STD\_US\_JUNE\_2017.GLB\GEB\_ENVIRONMENTAL\_WELL

Start Drilled	10/4/2017	End	10/4/2017	Total Depth (ft)	20	Logged By	PDR	Driller	Holt Services, Inc.	Drilling Method	Direct-Push	
Checked By		DLC										
Surface Elevation (ft)	418.66			Hammer Data				Drilling Equipment	Geoprobe 7800			
Vertical Datum	NAVD88											
Easting (X)	1275346.224			System Datum	WA State Plane North			See "Remarks" section for groundwater observed				
Northing (Y)	118670.642			Datum			NAD83					
Notes: Surface elevations pending from Sound Transit												

Elevation (feet)	FIELD DATA					Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor (ppm)	REMARKS
	Depth (feet)	Interval Recovered (in)	Blows/foot	Collected Sample	Sample Name Testing						
0	18	CA		FL363-B4-0.5	AC	Asphalt concrete pavement	NS	<1			
		CA		FL363-B4-0.5-1	SP-SM	Gray fine to coarse sand with silt (moist)	NS	<1			
					SM	Gray silty fine to coarse sand with occasional fine gravel (moist)					
					NR	No recovery					
4.15											
5	40				SM	Gray silty fine to medium sand with occasional coarse sand and fine gravel (moist)	NS	<1			
					SP-SM	Gray fine to coarse sand with silt, fine gravel and occasional coarse gravel (moist)					
		CA		FL363-B4-7-8	SP-SM	Dark brown fine to coarse sand with silt and occasional fine gravel (moist)	NS	<1			
					NR	Increasing silt					
					NR	No recovery					
10	36				SM	Gray silty fine to medium sand with fine gravel (moist)					
		CA		FL363-B4-11-12			NS	26.3			
		CA		FL363-B4-12-13	SM	Mottled gray/orange silt lens with coarse gravel and sand (moist)					
						Gray silty fine to medium sand with fine gravel (moist)	NS	376.2			
					NR	No recovery					
15	48				SM	Gray silty fine to coarse sand with occasional coarse sand (wet)	NS	64.1		Groundwater observed at approximately 15 feet at time of drilling	
		CA		FL363-B4-17-18		Medium sand content increases					
							NS	1.3			
20											

Note: See Figure A-1 for explanation of symbols.  
Coordinates Data Source: Horizontal approximated based on hand-held GPS, Vertical approximated based on Locational Survey by Lin & Associates

### Log of Direct-Push Boring FL363-B4



Project: Sound Transit - Federal Way Link Extension FL358\_361\_363  
Project Location: 2200 S. 320th Street, Federal Way, Washington  
Project Number: 4082-039-01

Figure A-8  
Sheet 1 of 1

Date: 11/28/17 Path: W:\PROJECTS\4082039\GINT\408203901 ENV LOGS.GPJ DBLibrary\Library\GEOENGINEERS\_DF\_STD\_US\_JUNE\_2017.GLB\GEB8\_ENVIRONMENTAL\_STANDARD\_NO\_GW

Start Drilled	10/4/2017	End	10/4/2017	Total Depth (ft)	20	Logged By	PDR	Driller	Holt Services, Inc.	Drilling Method	Direct-Push
Checked By						DLC					
Surface Elevation (ft)	422.34			Hammer Data				Drilling Equipment	Geoprobe 7800		
Vertical Datum	NAVD88										
Easting (X)	1275433.997			System Datum	WA State Plane North			See "Remarks" section for groundwater observed			
Northing (Y)	118632.1434						NAD83				
Notes: Surface elevations pending from Sound Transit											

Elevation (feet)	FIELD DATA					MATERIAL DESCRIPTION	Sheen	Headspace Vapor (ppm)	REMARKS
	Depth (feet)	Interval Recovered (in)	Blows/foot	Collected Sample	Sample Name Testing				
420	0	40			FL363-B5-0-0.5 CA	AC	NS	<1	Groundwater observed at approximately 10 feet at time of drilling
					FL363-B5-0.5-1 CA	SP-SM	NS	<1	
						SP-SM	NS	<1	
						NR			
	5	18			FL363-B5-5.5-6.5 CA	SP-SM	NS	1.5	
415						NR			
	10	40				SP-SM	-	77.8	
					FL363-B5-11.5-12.5 CA	SM	-	171.2	
410						NR	-	302.6	
						NR	-	44.3	
	15	60				SP	-	10.6	
405					FL363-B5-17-18 CA	SM	-	1.4	
	20								

Note: See Figure A-1 for explanation of symbols.  
Coordinates Data Source: Horizontal approximated based on hand-held GPS, Vertical approximated based on Locational Survey by Lin & Associates

### Log of Direct-Push Boring FL363-B5



Project: Sound Transit - Federal Way Link Extension FL358\_361\_363  
Project Location: 2200 S. 320th Street, Federal Way, Washington  
Project Number: 4082-039-01

Figure A-9  
Sheet 1 of 1

Date: 11/28/17 Path: W:\PROJECTS\4082039\GINT\408203901 ENV LOGS.GPJ DBLibrary\Library\GEOENGINEERS\_DF\_STD\_US\_JUNE\_2017.GLB\GEB8\_ENVIRONMENTAL\_STANDARD\_NO\_GW

Drilled	Start 10/4/2017	End 10/4/2017	Total Depth (ft)	20	Logged By Checked By	PDR DLC	Driller Holt Services, Inc.	Drilling Method	Direct-Push
Surface Elevation (ft) Vertical Datum	424.29 NAVD88		Hammer Data			Drilling Equipment Geoprobe 7800			
Easting (X) Northing (Y)	1275529.857 118616.3787		System Datum WA State Plane North NAD83			See "Remarks" section for groundwater observed			
Notes: Surface elevations pending from Sound Transit									

Elevation (feet)	FIELD DATA					Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor (ppm)	REMARKS
	Depth (feet)	Interval Recovered (in)	Blows/foot	Collected Sample	Sample Name Testing						
0	18				FL363-B6-0.0.5 FL363-B6-0.5-1	SP SPSM NR	Asphalt concrete pavement Brown fine to coarse sand with trace silt and fine gravel Gray fine to coarse sand with silt, fine gravel and occasional coarse gravel (moist) No recovery	NS NS NS	<1 <1 <1	Groundwater observed at approximately 12 feet at time of drilling	
4.20	24				FL363-B6-6.7 CA	SPSM NR	Gray fine to coarse sand with silt, fine gravel and occasional coarse gravel (moist) No recovery	NS NS	<1 <1		
4.15	48				FL363-B6-11-12 CA	SPSM MH SM ML NR	Gray fine to coarse sand with silt, fine gravel and occasional coarse gravel (moist) Dark brown organic silt with fine sand and organic matter (roots) (moist) Gray silty fine to coarse sand (wet) Green-gray silt with sand and occasional fine gravel (moist) No recovery	NS NS NS NS	<1 <1 <1 <1		
4.10	36				FL363-B6-17-18 CA	SM NR	Brown silty fine to coarse sand with fine gravel (moist) Medium sand increases No recovery	NS NS	- -		
4.05	20										

Note: See Figure A-1 for explanation of symbols.  
Coordinates Data Source: Horizontal approximated based on hand-held GPS, Vertical approximated based on Locational Survey by Lin & Associates

### Log of Direct-Push Boring FL363-B6



Project: Sound Transit - Federal Way Link Extension FL358\_361\_363  
Project Location: 2200 S. 320th Street, Federal Way, Washington  
Project Number: 4082-039-01

Figure A-10  
Sheet 1 of 1

Date: 11/28/17 Path: W:\PROJECTS\4082039\GINT\408203901 ENV LOGS.GPJ DBLibrary\Library\GEOENGINEERS\_DF\_STD\_US\_JUNE\_2017.GLB\GEB8\_ENVIRONMENTAL\_STANDARD\_NO\_GW

Start Drilled	10/4/2017	End	10/4/2017	Total Depth (ft)	20	Logged By	PDR	Driller	Holt Services, Inc.	Drilling Method	Direct-Push
Surface Elevation (ft)	423.62			Hammer Data				Drilling Equipment	Geoprobe 7800		
Vertical Datum	NAVD88			System Datum	WA State Plane North NAD83			See "Remarks" section for groundwater observed			
Easting (X)	1275532.102										
Northing (Y)	118542.3638										
Notes: Surface elevations pending from Sound Transit											

Elevation (feet)	FIELD DATA					Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor (ppm)	REMARKS
	Depth (feet)	Interval Recovered (in)	Blows/foot	Collected Sample	Sample Name Testing						
0	36				FL363-B7-0-0.5 CA	AC	Asphalt concrete pavement	NS	<1		
					FL363-B7-0.5-1 CA	SP	Brown fine to coarse sand with fine to coarse gravel and trace silt (moist)				
						SM	Gray silty fine to coarse sand with fine gravel and occasional coarse gravel (moist)				
						ML	Dark brown silt with fine to coarse sand, occasional gravel and organic matter (wood) (roots) (moist)	NS	<1		
4.20						NR	No recovery				
	30				FL363-B7-6-7 CA	SPSM	Red-brown fine to coarse sand with silt and fine gravel (moist)	NS	<1		
						SM	Gray silty fine to medium sand with coarse sand and fine to coarse gravel (moist)	NS	<1		
4.15						NR	No recovery				
	24				FL363-B7-10-11 CA	SPSM	Gray fine to coarse sand with silt (wet)	NS	<1	Groundwater observed at approximately 10 feet at time of drilling	
4.10						NR	No recovery				
	36				FL363-B7-17-18 CA	SPSM	Gray fine to coarse sand with silt (wet)	NS	<1		
4.05							Becomes moist	NS	<1		
20											

Note: See Figure A-1 for explanation of symbols.

Coordinates Data Source: Horizontal approximated based on hand-held GPS, Vertical approximated based on Locational Survey by Lin & Associates

### Log of Direct-Push Boring FL363-B7



Project: Sound Transit - Federal Way Link Extension FL358\_361\_363  
 Project Location: 2200 S. 320th Street, Federal Way, Washington  
 Project Number: 4082-039-01

Figure A-11  
 Sheet 1 of 1

Date: 11/28/17 Path: W:\PROJECTS\4082039\GINT\408203901 ENV LOGS.GPJ DBLibrary\Library\GEOENGINEERS\_DF\_STD\_US\_JUNE\_2017.GLB\GEB8\_ENVIRONMENTAL\_STANDARD\_NO\_GW



Photograph 1 – FL358-MW1 boring location in the northeast corner of the property outside the former Y Pay Mor Dry Cleaner space. View to northwest.



Photograph 2 – FL358-MW2 boring location in the northeast corner of the property outside the former Y Pay Mor Dry Cleaner space. View to south.

FL358/FL361/FL363 Site Photographs - October 2017  
2200 S. 320th Street, Federal Way, WA

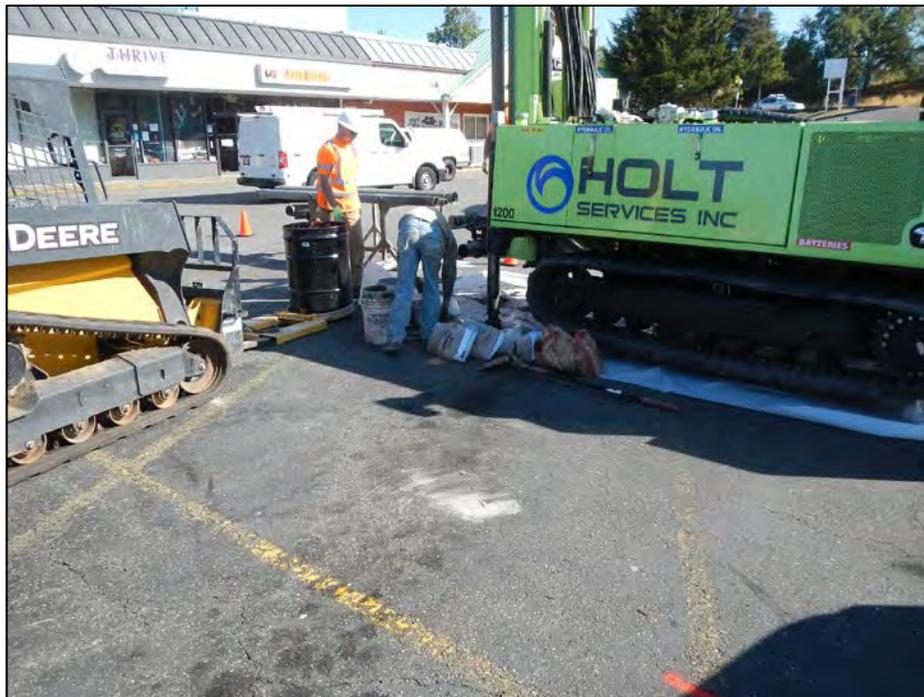
Phase II Environmental Site Assessment  
Federal Way Link Extension  
Federal Way, Washington



Figure A-12



Photograph 3 – FL358-MW3 boring location (in front of drill rig – see arrow) located near the southeast corner of the shopping center, south of the former Y Pay Mor Dry Cleaner space. View to west.



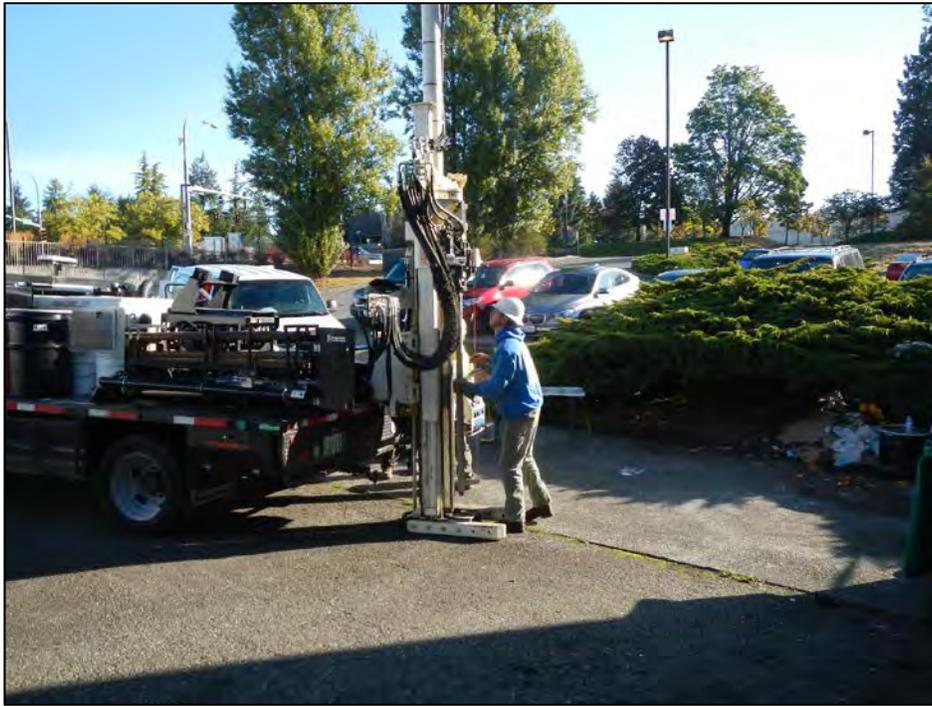
Photograph 4 – FL358-MW4 boring location in the parking lot south of the former Y Pay Mor Dry Cleaner space. View to northeast.

FL358/FL361/FL363 Site Photographs - October 2017  
2200 S. 320th Street, Federal Way, WA

Phase II Environmental Site Assessment  
Federal Way Link Extension  
Federal Way, Washington



Figure A-13



Photograph 5 - FL358 -B1 boring location near the northeast corner of the property, outside to the north of the former Y Pay Mor Dry Cleaner space. View to northeast.



Photograph 6 - FL363-B3 boring location in eastern portion of the property, north of Wendy's Restaurant. View to north.

<p><b>FL358/FL361/FL363 Site Photographs - October 2017</b>  <b>2200 S. 320th Street, Federal Way, WA</b></p>	
<p>Phase II Environmental Site Assessment          Federal Way Link Extension          Federal Way, Washington</p>	
<p><b>GEOENGINEERS</b> </p>	<p><b>Figure A-14</b></p>



Photograph 7 - FL363-B4 boring location in southern portion of shopping center mall parking lot, northwest of the ARCO. View to west.



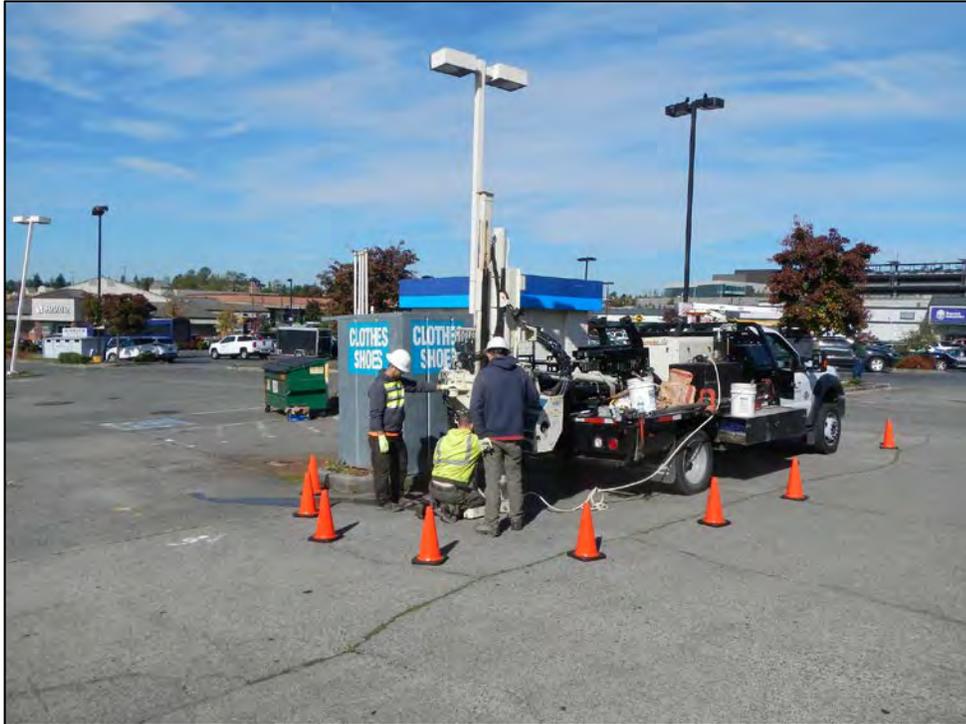
Photograph 8 - FL363-B5 location in shopping center access road north of the ARCO. View to north.

FL358/FL361/FL363 Site Photographs - October 2017  
2200 S. 320th Street, Federal Way, WA

Phase II Environmental Site Assessment  
Federal Way Link Extension  
Federal Way, Washington



Figure A-15



Photograph 9 – FL363-B6 boring location in shopping center access road, east of the ARCO. View to northwest.



Photograph 10 - FL363-B7 boring location to the east of the ARCO service station. View to north/northwest.

FL358/FL361/FL363 Site Photographs - October 2017  
2200 S. 320th Street, Federal Way, WA

Phase II Environmental Site Assessment  
Federal Way Link Extension  
Federal Way, Washington



Figure A-16



Photograph 9 –Phase II ESA drum storage location northeast of the shopping center building on FL358.

004082-039-01 Date: 10/25/2017

FL358/FL361/FL363 Site Photographs - October 2017  
2200 S. 320th Street, Federal Way, WA

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Federal Way Link Extension  
Federal Way, Washington

**GEOENGINEERS** 

Figure A-17

### SOIL CLASSIFICATION CHART

MAJOR DIVISIONS			SYMBOLS		TYPICAL DESCRIPTIONS
			GRAPH	LETTER	
COARSE GRAINED SOILS	GRAVEL AND GRAVELLY SOILS	CLEAN GRAVELS <small>(LITTLE OR NO FINES)</small>		<b>GW</b>	WELL-GRADED GRAVELS, GRAVEL - SAND MIXTURES
		GRAVELS WITH FINES <small>(APPRECIABLE AMOUNT OF FINES)</small>		<b>GP</b>	POORLY-GRADED GRAVELS, GRAVEL - SAND MIXTURES
	MORE THAN 50% OF COARSE FRACTION RETAINED ON NO. 4 SIEVE	GRAVELS WITH FINES <small>(APPRECIABLE AMOUNT OF FINES)</small>		<b>GM</b>	SILTY GRAVELS, GRAVEL - SAND - SILT MIXTURES
		GRAVELS WITH FINES <small>(APPRECIABLE AMOUNT OF FINES)</small>		<b>GC</b>	CLAYEY GRAVELS, GRAVEL - SAND - CLAY MIXTURES
MORE THAN 50% RETAINED ON NO. 200 SIEVE	SAND AND SANDY SOILS	CLEAN SANDS <small>(LITTLE OR NO FINES)</small>		<b>SW</b>	WELL-GRADED SANDS, GRAVELLY SANDS
		CLEAN SANDS <small>(LITTLE OR NO FINES)</small>		<b>SP</b>	POORLY-GRADED SANDS, GRAVELLY SAND
	MORE THAN 50% OF COARSE FRACTION PASSING NO. 4 SIEVE	SANDS WITH FINES <small>(APPRECIABLE AMOUNT OF FINES)</small>		<b>SM</b>	SILTY SANDS, SAND - SILT MIXTURES
		SANDS WITH FINES <small>(APPRECIABLE AMOUNT OF FINES)</small>		<b>SC</b>	CLAYEY SANDS, SAND - CLAY MIXTURES
FINE GRAINED SOILS	SILTS AND CLAYS	LIQUID LIMIT LESS THAN 50		<b>ML</b>	INORGANIC SILTS, ROCK FLOUR, CLAYEY SILTS WITH SLIGHT PLASTICITY
				<b>CL</b>	INORGANIC CLAYS OF LOW TO MEDIUM PLASTICITY, GRAVELLY CLAYS, SANDY CLAYS, SILTY CLAYS, LEAN CLAYS
				<b>OL</b>	ORGANIC SILTS AND ORGANIC SILTY CLAYS OF LOW PLASTICITY
	SILTS AND CLAYS	LIQUID LIMIT GREATER THAN 50		<b>MH</b>	INORGANIC SILTS, MICACEOUS OR DIATOMACEOUS SILTY SOILS
				<b>CH</b>	INORGANIC CLAYS OF HIGH PLASTICITY
				<b>OH</b>	ORGANIC CLAYS AND SILTS OF MEDIUM TO HIGH PLASTICITY
HIGHLY ORGANIC SOILS				<b>PT</b>	PEAT, HUMUS, SWAMP SOILS WITH HIGH ORGANIC CONTENTS

NOTE: Dual symbols are used to indicate borderline or dual soil classifications.

#### ADDITIONAL MATERIAL SYMBOLS

SYMBOLS		TYPICAL DESCRIPTIONS
GRAPH	LETTER	
	<b>AC</b>	ASPHALT CONCRETE
	<b>CC</b>	CEMENT CONCRETE
	<b>CR</b>	CRUSHED ROCK/QUARRY SPALLS
	<b>TS</b>	TOPSOIL/FOREST DUFF/SOD

#### Sampler Symbol Descriptions

- Standard Penetration Test (SPT)
- Direct-Push
- Shelby tube
- Bulk or grab
- Continuous Coring

Blowcount is recorded for driven samplers as the number of blows required to advance sampler 12 inches (or distance noted). See exploration log for hammer weight and drop.

#### Groundwater Contact

- 
- 
- 

#### Abbreviations

PID = Photoionization Detector





O'Neill Service Group  
 17619 NE 67th Ct #100  
 Redmond, WA 98052  
 O'Neill Service Group Telephone: (425) 429-7800

# BORING NUMBER 358-B1

PAGE 1 OF 1

**CLIENT** Kiewit/Sound Transit  
**PROJECT NUMBER** 2021  
**DATE STARTED** 5/7/20 **COMPLETED** 5/7/20  
**DRILLING CONTRACTOR** Cascade  
**DRILLING METHOD** CME75 HSA  
**LOGGED BY** V. Atkins **CHECKED BY** S. Flowers  
**NOTES**

**PROJECT NAME** FL-358  
**PROJECT LOCATION** Federal Way, WA  
**GROUND ELEVATION** 425.32 ft MSL **HOLE SIZE** 8 5/8"  
**GROUND WATER LEVELS:**  
 ▽ **AT TIME OF DRILLING** 9.00 ft / Elev 416.32 ft  
**AT END OF DRILLING** ---  
**AFTER DRILLING** ---

ENVIRONMENTAL BH - GINT STD US.GDT - 12/23/20 16:22 - Z:\SHAREDACTIVE PROJECTS(2021) KIEWIT FEDERAL WAY\ENVIRONMENTAL\CLEANUP ACTIONS\CLEANUP REPORTS\FL358\GINT\F200\_FL358\_B1-B9.GPJ

DEPTH (ft)	SAMPLE TYPE NUMBER	BLOW COUNTS (N VALUE)	ENVIRONMENTAL DATA	GRAPHIC LOG	MATERIAL DESCRIPTION	WELL DIAGRAM
0						
0.5				Asphalt	Asphalt	424.8
5	SPT S1	7-11-10 (21)	PID = 0	(SM) Medium dense, blue gray to brown silty SAND with gravel to cobbles, trace roots, moist, no apparent odor or staining.	(SM) Medium dense, blue gray to brown silty SAND with gravel to cobbles, trace roots, moist, no apparent odor or staining.	420.3
	SPT S2	6-8-10 (18)	PID = 0.2	(ML) Medium dense to dense, dark red-brown SILT with organics and peat, trace gravel, moist, no apparent odor or staining.	(ML) Medium dense to dense, dark red-brown SILT with organics and peat, trace gravel, moist, no apparent odor or staining.	
	SPT S3	16-17-25 (42)	PID = 0	▽		
10	SPT S4	30-50	PID = 0	(SM) Very dense, gray silty SAND with gravel, wet, no apparent odor or staining. Limited recovery.	(SM) Very dense, gray silty SAND with gravel, wet, no apparent odor or staining. Limited recovery.	415.3
15	SPT S5	50	PID = 0	Rig chatter	Rig chatter	
20	SPT S6	50	PID = 0	(SM) Very dense, gray silty SAND with fine gravel, wet. Heave.	(SM) Very dense, gray silty SAND with fine gravel, wet. Heave.	405.8
25	SPT S7	50	PID = 0	(SP-SC) Very dense, gray medium SAND with clay and fine gravel, wet.	(SP-SC) Very dense, gray medium SAND with clay and fine gravel, wet.	400.3 399.8
Bottom of borehole at 25.5 feet.						



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 Redmond, WA 98052  
 O'Neill Service Group Telephone: (425) 429-7800

# BORING NUMBER 358-B2

PAGE 1 OF 1

<b>CLIENT</b> Kiewit/Sound Transit	<b>PROJECT NAME</b> FL-358
<b>PROJECT NUMBER</b> 2021	<b>PROJECT LOCATION</b> Federal Way, WA
<b>DATE STARTED</b> 5/7/20	<b>COMPLETED</b> 5/7/20
<b>DRILLING CONTRACTOR</b> Cascade	<b>GROUND ELEVATION</b> 426.95 ft MSL <b>HOLE SIZE</b> 8 5/8"
<b>DRILLING METHOD</b> CME75 HSA	<b>GROUND WATER LEVELS:</b>
<b>LOGGED BY</b> V. Atkins	<b>AT TIME OF DRILLING</b> 14.00 ft / Elev 412.95 ft
<b>CHECKED BY</b> S. Flowers	<b>AT END OF DRILLING</b> ---
<b>NOTES</b>	<b>AFTER DRILLING</b> ---

ENVIRONMENTAL BH - GINT STD US.GDT - 12/23/20 16:22 - Z:\SHAREDACTIVE PROJECTS(2021) KIEWIT FEDERAL WAY\ENVIRONMENTAL\CLEANUP ACTIONS\CLEANUP REPORTS\FL358\GINT\F200\_FL358\_B1-B9.GPJ

DEPTH (ft)	SAMPLE TYPE NUMBER	BLOW COUNTS (N VALUE)	ENVIRONMENTAL DATA	GRAPHIC LOG	MATERIAL DESCRIPTION	WELL DIAGRAM
0					Asphalt	
1.0					426.0	
5	SPT S1	18-19-13 (32)	PID = 0		(SM) Dense, brown silty SAND with organics, grading to gray silty sand with gravel, moist, no apparent odor or staining.	
10	SPT S2	100/4"	PID = 0		417.0 (SM) No recovery. Woody debris	
11.0					416.0 (SM) Very dense, dark brown silty SAND with gravel, gray layers, moist, no apparent odor or staining.	
15	SPT S3	21-50/5"	PID = 0		▽	
15.0	SPT S4	21-20-24 (44)	PID = 0		412.0 (ML) Hard, dark brown SILT with peat and organic silt, wet, no apparent odor or staining.	
20	SPT S5	19-23-30 (53)	PID = 0		407.5 (SP) Very dense, gray-brown medium silty SAND with gravel up to 2", wet, no apparent odor or staining. Heave.	
25	SPT S6	50	PID = 0		401.5	

Bottom of borehole at 25.5 feet.



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# BORING NUMBER 358-B3

PAGE 1 OF 1

**CLIENT** Kiewit/Sound Transit  
**PROJECT NUMBER** 2021  
**DATE STARTED** 5/7/20 **COMPLETED** 5/8/20  
**DRILLING CONTRACTOR** Cascade  
**DRILLING METHOD** CME75 HSA  
**LOGGED BY** V. Atkins **CHECKED BY** S. Flowers  
**NOTES**

**PROJECT NAME** FL-358  
**PROJECT LOCATION** Federal Way, WA  
**GROUND ELEVATION** 423 ft MSL **HOLE SIZE** 8 5/8"  
**GROUND WATER LEVELS:**  
 ▽ **AT TIME OF DRILLING** 16.00 ft / Elev 407.00 ft  
 ▼ **AT END OF DRILLING** 9.80 ft / Elev 413.20 ft  
**AFTER DRILLING** ---

ENVIRONMENTAL BH - GINT STD US.GDT - 12/23/20 16:22 - Z:\SHARE\ACTIVE PROJECTS(2021) KIEWIT FEDERAL WAY\ENVIRONMENTAL\CLEANUP ACTIONS\CLEANUP REPORTS\FL358\GINT\F200\_FL358\_B1-B9.GPJ

DEPTH (ft)	SAMPLE TYPE NUMBER	BLOW COUNTS (N VALUE)	ENVIRONMENTAL DATA	GRAPHIC LOG	MATERIAL DESCRIPTION	WELL DIAGRAM
0						
0.5				0.5	Asphalt (SP) Gravelly sand (FILL). 422.5	
5	SPT S1	23	PID = 0	4.0	(SM) Medium dense, gray-brown silty SAND with gravel, trace oxidation, moist, no apparent odor or staining. 419.0	Temporary well installed 5/7/2020
	SPT S2	22-22-30 (52)	PID = 0	7.0	(ML) Very hard, gray-brown mottled SILT with sand, trace gravel, moist, no apparent odor or staining. 416.0	
10	SPT S3	25-29-29 (58)	PID = 0			
	SPT S4	12-24-21 (45)	PID = 0			
15	SPT S5	21-25-25 (50)	PID = 0	15.0	(ML) Very hard, gray SILT with sand and clay, slightly plastic, moist, no apparent odor or staining. 408.0	
20	SPT S6	50	PID = 0	18.0	(GM) Very dense, brown silty GRAVEL, wet. Driller reported heave in the auger. 405.0	
25				25.5		

Bottom of borehole at 25.5 feet.

397.5



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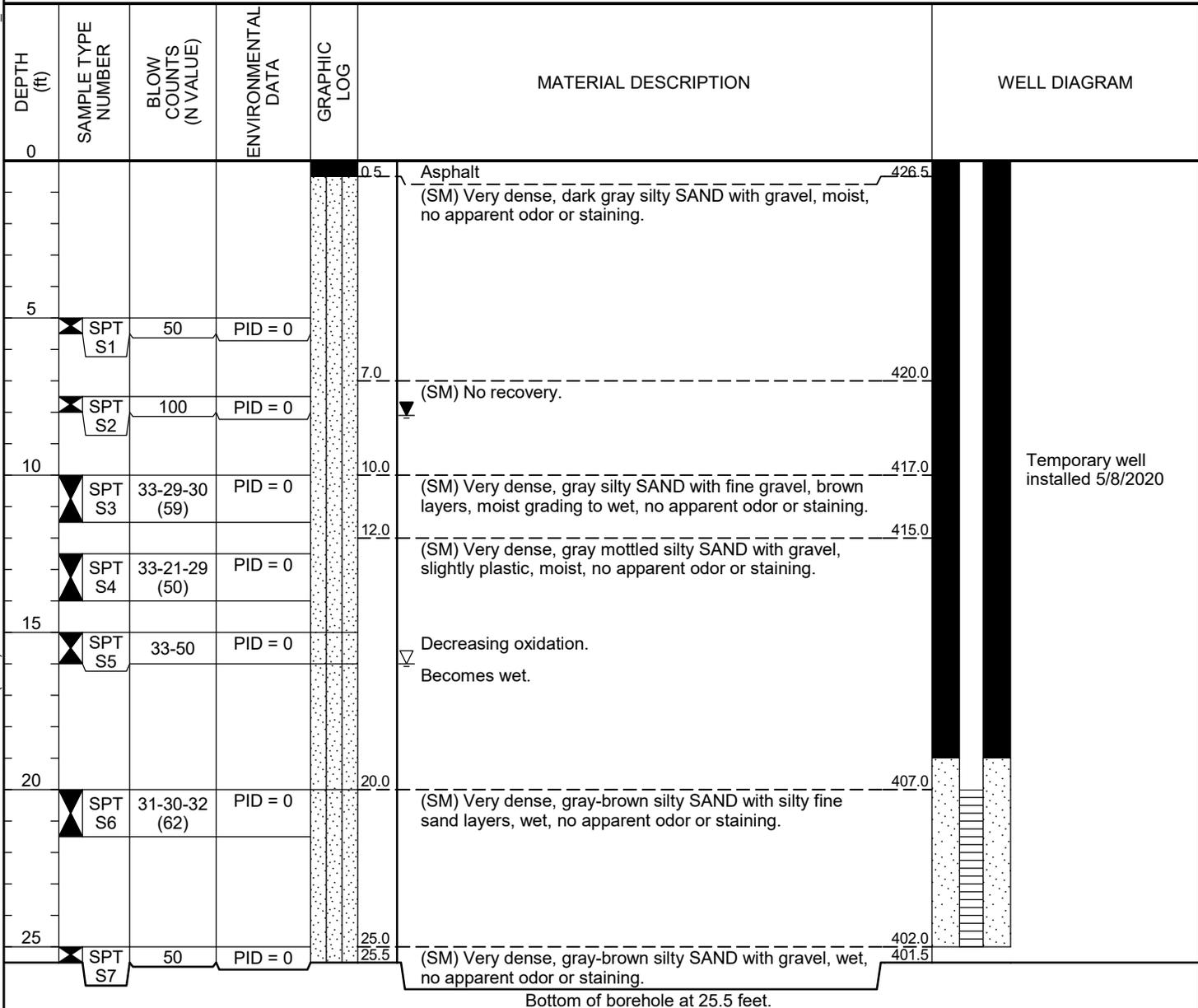
# BORING NUMBER 358-B4

PAGE 1 OF 1

**CLIENT** Kiewit/Sound Transit  
**PROJECT NUMBER** 2021  
**DATE STARTED** 5/8/20 **COMPLETED** 5/8/20  
**DRILLING CONTRACTOR** Cascade  
**DRILLING METHOD** CME75 HSA  
**LOGGED BY** V. Atkins **CHECKED BY** S. Flowers  
**NOTES**

**PROJECT NAME** FL-358  
**PROJECT LOCATION** Federal Way, WA  
**GROUND ELEVATION** 427 ft MSL **HOLE SIZE** 8 5/8"  
**GROUND WATER LEVELS:**  
 ▽ **AT TIME OF DRILLING** 16.00 ft / Elev 411.00 ft  
 ▼ **AT END OF DRILLING** 8.10 ft / Elev 418.90 ft  
**AFTER DRILLING** ---

ENVIRONMENTAL BH - GINT STD US.GDT - 12/23/20 16:22 - Z:\SHARE\ACTIVE PROJECTS(2021) KIEWIT FEDERAL WAY\ENVIRONMENTAL\CLEANUP ACTIONS\CLEANUP REPORTS\FL358\GINT\F200\_FL358\_B1-B9.GPJ



Bottom of borehole at 25.5 feet.



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 Redmond, WA 98052  
 O'Neill Service Group Telephone: (425) 429-7800

# BORING NUMBER 358-B5

PAGE 1 OF 1

**CLIENT** Kiewit/Sound Transit  
**PROJECT NUMBER** 2021  
**DATE STARTED** 5/8/20 **COMPLETED** 5/8/20  
**DRILLING CONTRACTOR** Cascade  
**DRILLING METHOD** CME75 HSA  
**LOGGED BY** V. Atkins **CHECKED BY** S. Flowers  
**NOTES**

**PROJECT NAME** FL-358  
**PROJECT LOCATION** Federal Way, WA  
**GROUND ELEVATION** 426.37 ft MSL **HOLE SIZE** 8 5/8"  
**GROUND WATER LEVELS:**  
 ▽ **AT TIME OF DRILLING** 7.00 ft / Elev 419.37 ft  
 ▼ **AT END OF DRILLING** 9.30 ft / Elev 417.07 ft  
**AFTER DRILLING** ---

ENVIRONMENTAL BH - GINT STD US.GDT - 12/23/20 16:22 - Z:\SHARE\ACTIVE PROJECTS\2021\KIEWIT FEDERAL WAY\ENVIRONMENTAL\CLEANUP ACTIONS\CLEANUP REPORTS\FL358\B1-B9.GPJ

DEPTH (ft)	SAMPLE TYPE NUMBER	BLOW COUNTS (N VALUE)	ENVIRONMENTAL DATA	GRAPHIC LOG	MATERIAL DESCRIPTION	WELL DIAGRAM
0					Concrete.	
0.5					(SP) Brown SAND with silt and gravel (FILL).	
2.5	SPT S1	32-15-20 (35)	PID = 0		(SM) Dense, gray-brown silty SAND with gravel, moist, no apparent odor or staining.	
5.0	SPT S2	18-19-18 (37)	PID = 0		(SM) Dense, brownish-yellow silty SAND with gravel, grading to dark red-brown with peat and organic silt, moist.	
7.0	SPT S3	13-8-14 (22)	PID = 0		(SM) Interbedded SAND with silt and peat, trace gravel, wet, no apparent odor or staining.	
9.0	SPT S4	19-25-27 (52)	PID = 0		(SM) Very dense, gray-brown silty SAND with gravel, wet, no apparent odor or staining.	
15.0	SPT S5	30	PID = 0			
15.0	SPT S6	12-27-32 (59)	PID = 0		(ML) Very hard, gray-brown mottled SILT with sand and gravel, wet, no apparent odor or staining.	
20.0	SPT S7	24-50	PID = 0		(ML) Very hard, gray-brown mottled SILT with sand and gravel with oxidation, wet, no apparent odor or staining.	
25.0	SPT S8	50/4"	PID = 0		(ML) Very dense, gray gravelly SILT, wet, no apparent odor or staining.	

Temporary well installed 5/8/2020

Bottom of borehole at 25.5 feet.



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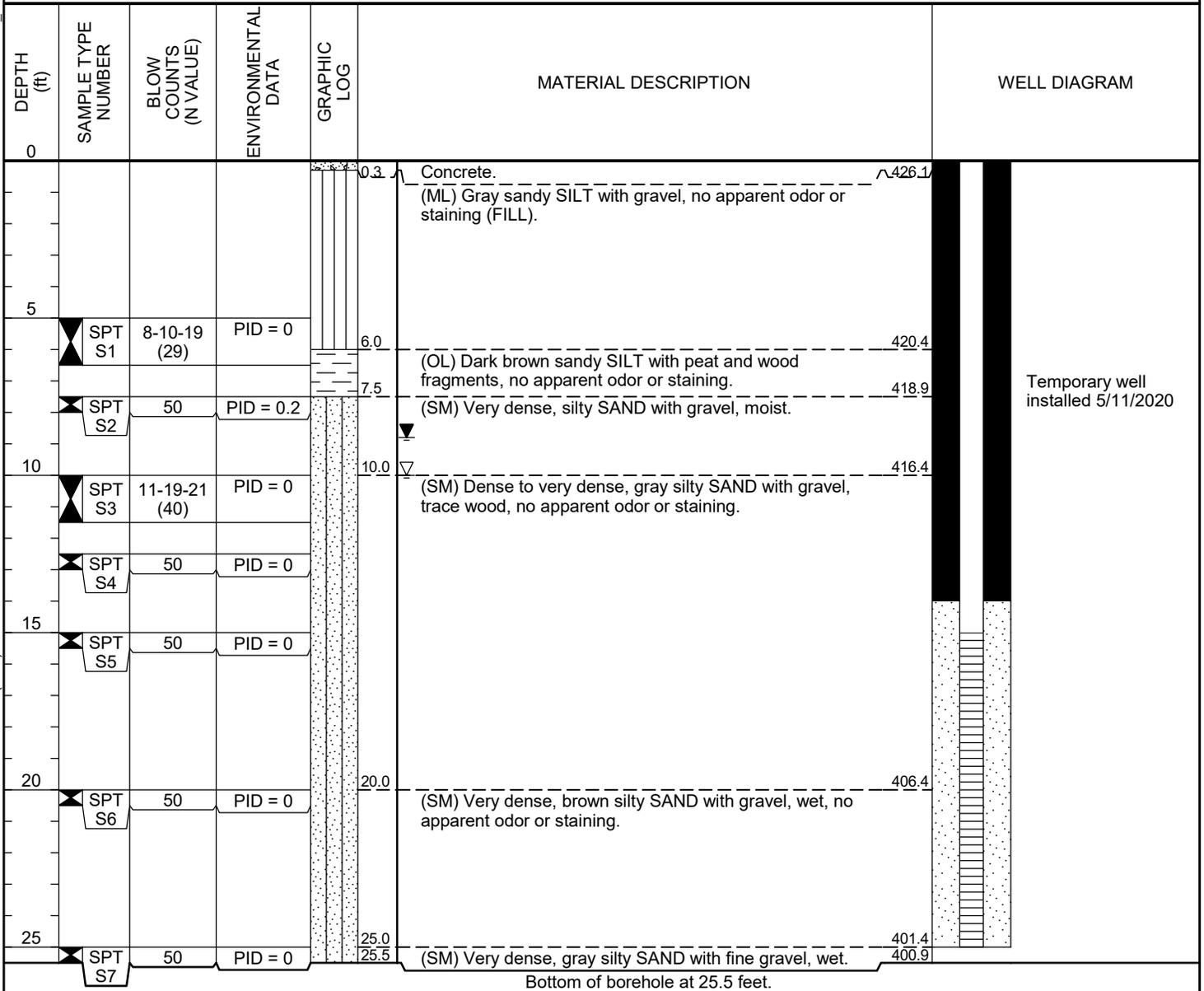
# BORING NUMBER 358-B6

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**CLIENT** Kiewit/Sound Transit  
**PROJECT NUMBER** 2021  
**DATE STARTED** 5/8/20 **COMPLETED** 5/11/20  
**DRILLING CONTRACTOR** Cascade  
**DRILLING METHOD** CME75 HSA  
**LOGGED BY** V. Atkins **CHECKED BY** S. Flowers  
**NOTES**

**PROJECT NAME** FL-358  
**PROJECT LOCATION** Federal Way, WA  
**GROUND ELEVATION** 426.37 ft MSL **HOLE SIZE** 8 5/8"  
**GROUND WATER LEVELS:**  
 ▽ **AT TIME OF DRILLING** 10.00 ft / Elev 416.37 ft  
 ▼ **AT END OF DRILLING** 8.80 ft / Elev 417.57 ft  
**AFTER DRILLING** ---

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# BORING NUMBER 358-B7

PAGE 1 OF 1

**CLIENT** Kiewit/Sound Transit  
**PROJECT NUMBER** 2021  
**DATE STARTED** 5/11/20 **COMPLETED** 5/11/20  
**DRILLING CONTRACTOR** Cascade  
**DRILLING METHOD** CME75 HSA  
**LOGGED BY** V. Atkins **CHECKED BY** S. Flowers  
**NOTES**

**PROJECT NAME** FL-358  
**PROJECT LOCATION** Federal Way, WA  
**GROUND ELEVATION** 426.37 ft MSL **HOLE SIZE** 8 5/8"  
**GROUND WATER LEVELS:**  
 ▽ **AT TIME OF DRILLING** 13.00 ft / Elev 413.37 ft  
 ▼ **AT END OF DRILLING** 8.90 ft / Elev 417.47 ft  
**AFTER DRILLING** ---

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DEPTH (ft)	SAMPLE TYPE NUMBER	BLOW COUNTS (N VALUE)	ENVIRONMENTAL DATA	GRAPHIC LOG	MATERIAL DESCRIPTION	WELL DIAGRAM
0						
0.5					Concrete. (SP) No recovery.	
5	SPT S1	27-50	PID = 0			
5	SPT S2	36-32-43 (75)	PID = 0		(SP) Very dense, brown SAND with gravel and peat/organics, moist, no apparent odor or staining.	
7.5	SPT S3	43-50	PID = 0		(SM) Very dense, gray silty SAND with gravel, moist, no apparent odor or staining.	
10	SPT S4	20-50	PID = 0		(ML) Hard, olive-gray SILT with sand, mottled, moist, no apparent odor or staining.	
12.5					Grading to wet.	
15	SPT S5	22-35-47 (82)	PID = 0			
20	SPT S6	22-50	PID = 0		(SM) Very dense, gray-brown silty SAND with gravel, wet, no apparent odor or staining.	
25	SPT S7	32-50	PID = 0			
25.5					Bottom of borehole at 25.5 feet.	



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# BORING NUMBER 358-B8

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**CLIENT** Kiewit/Sound Transit  
**PROJECT NUMBER** 2021  
**DATE STARTED** 5/11/20 **COMPLETED** 5/11/20  
**DRILLING CONTRACTOR** Cascade  
**DRILLING METHOD** CME75 HSA  
**LOGGED BY** V. Atkins **CHECKED BY** S. Flowers  
**NOTES**

**PROJECT NAME** FL-358  
**PROJECT LOCATION** Federal Way, WA  
**GROUND ELEVATION** 426.02 ft MSL **HOLE SIZE** 8 5/8"  
**GROUND WATER LEVELS:**  
 ∇ **AT TIME OF DRILLING** 12.00 ft / Elev 414.02 ft  
**AT END OF DRILLING** ---  
**AFTER DRILLING** ---

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DEPTH (ft)	SAMPLE TYPE NUMBER	BLOW COUNTS (N VALUE)	ENVIRONMENTAL DATA	GRAPHIC LOG	MATERIAL DESCRIPTION	WELL DIAGRAM
0						
0.5					Concrete.	425.5
3.5	SPT S1	50	PID = 0		(SM) Very dense, brown silty SAND with trace gravel and sandy layers, moist, no apparent odor or staining.	
5.0	SPT S2	16-15-24 (39)	PID = 0		(ML) Dense, dark brown SILT with peat and silty sand layers, moist, no apparent odor or staining.	421.0
7.5	SPT S3	50	PID = 0		(ML) Hard, olive-gray SILT with sand and trace fine gravel and trace clay, mottled, wet, no apparent odor or staining.	418.5
10.5	SPT S4	23-50	PID = 0			
13.0	SPT S5	50	PID = 0		(ML) Hard, light brown SILT with sand and trace fine gravel and trace clay, mottled, trace organics, wet, no apparent odor or staining.	413.0
15.5	SPT S6	31-50	PID = 0			
20.0	SPT S7	31-50	PID = 0		(SM) Very dense, gray-brown silty SAND with gravel, trace oxidation, wet, no apparent odor or staining.	406.0
25.5	SPT S8	50	PID = 0			400.5
Bottom of borehole at 25.5 feet.						



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# BORING NUMBER 358-B9

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**CLIENT** Kiewit/Sound Transit  
**PROJECT NUMBER** 2021  
**DATE STARTED** 5/11/20 **COMPLETED** 5/11/20  
**DRILLING CONTRACTOR** Cascade  
**DRILLING METHOD** CME75 HSA  
**LOGGED BY** V. Atkins **CHECKED BY** S. Flowers  
**NOTES**

**PROJECT NAME** FL-358  
**PROJECT LOCATION** Federal Way, WA  
**GROUND ELEVATION** 426.15 ft MSL **HOLE SIZE** 8 5/8"  
**GROUND WATER LEVELS:**  
 ▽ **AT TIME OF DRILLING** 12.00 ft / Elev 414.15 ft  
**AT END OF DRILLING** ---  
**AFTER DRILLING** ---

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DEPTH (ft)	SAMPLE TYPE NUMBER	BLOW COUNTS (N VALUE)	ENVIRONMENTAL DATA	GRAPHIC LOG	MATERIAL DESCRIPTION	WELL DIAGRAM
0						
0.5					Concrete. 425.7	
2.5	SPT S1	50	PID = 0		(SP) Brown SAND with gravel (FILL). 423.7	
5	SPT S2	14-15-12 (27)	PID = 0		(SM) Dense to very dense, gray silty SAND with gravel, moist, no apparent odor or staining. 420.2	
7.5	SPT S3	6-8-50 (58)	PID = 0		(SM) No recovery. 418.7	
10	SPT S4	46-50	PID = 0		(SM) Very dense, gray silty SAND with trace gravel, moist, no apparent odor or staining. 416.2	
12.5	SPT S5	37-50	PID = 0		(ML) Hard, gray SILT with sand and gravel, moist grading to wet, no apparent odor or staining. 413.7	
15	SPT S6	33-50	PID = 0		(SM) Very dense, gray-brown silty SAND with gravel, wet, no apparent odor or staining. 411.2	
20	SPT S7	50	PID = 0		(SM) Very dense, gray silty SAND with gravel, wet, no apparent odor or staining. Slight heave. 406.2	
25	SPT S8	26-50	PID = 0		400.7	
Bottom of borehole at 25.5 feet.						



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# BORING NUMBER 358-B10

<b>CLIENT</b> Kiewit/Sound Transit	<b>PROJECT NAME</b> FL-358
<b>PROJECT NUMBER</b> 2021	<b>PROJECT LOCATION</b> Federal Way, WA
<b>DATE STARTED</b> 6/9/20	<b>COMPLETED</b> 6/9/20
<b>DRILLING CONTRACTOR</b> Holt Drilling	<b>GROUND ELEVATION</b> 425.62 ft MSL
<b>DRILLING METHOD</b> Mobile B59-HSA	<b>HOLE SIZE</b> 8 5/8"
<b>LOGGED BY</b> V. Atkins	<b>CHECKED BY</b> S. Flowers
<b>NOTES</b>	<b>GROUND WATER LEVELS:</b>
	∇ <b>AT TIME OF DRILLING</b> 11.00 ft / Elev 414.62 ft
	<b>AT END OF DRILLING</b> ---
	<b>AFTER DRILLING</b> ---

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DEPTH (ft)	SAMPLE TYPE NUMBER	BLOW COUNTS (N VALUE)	ENVIRONMENTAL DATA	GRAPHIC LOG	MATERIAL DESCRIPTION	WELL DIAGRAM
0					(SP) Dense, yellow-brown SAND, moist (FILL).	
2.5	SPT S1	16-17-17 (34)	PID = 0			
423.1					No samples collected. See boring 358-B5 for lithology.	
25.0	SPT S2	50/4"	PID = 0		(SM) Very dense, gray SAND with silt and gravel. Wet, no apparent odor or staining.	
26.0					(ML) Hard, gray SILT with medium to coarse sand, moist, no apparent odor or staining.	
30	SPT S3	50	PID = 0			
35.0						

(Continued Next Page)



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# BORING NUMBER 358-B10

CLIENT Kiewit/Sound Transit

PROJECT NAME FL-358

PROJECT NUMBER 2021

PROJECT LOCATION Federal Way, WA

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DEPTH (ft)	SAMPLE TYPE NUMBER	BLOW COUNTS (N VALUE)	ENVIRONMENTAL DATA	GRAPHIC LOG	MATERIAL DESCRIPTION	WELL DIAGRAM
35	SPT S4	40-50	PID = 0		(ML) Hard, gray-green SILT with sand, trace fine gravel, moist, no apparent odor or staining.	
40	SPT S5	30-50/2"	PID = 0	40.0	(SM) Very dense, gray fine silty SAND, trace gravel. Wet, no apparent odor or staining.	385.6
45	SPT S6	12-50/3"	PID = 0	45.0	(SM) Very dense, gray fine silty SAND, occasional silt layers, slightly stratified. Moist to wet, no apparent odor or staining.	380.6
50	SPT S7	50/4"	PID = 0	50.0 50.3	(SP) Very dense, gray SAND with silt and gravel, moist to wet, no apparent odor or staining. Bottom of borehole at 50.3 feet.	375.6 375.3



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# BORING NUMBER 358-B11

**CLIENT** Kiewit/Sound Transit  
**PROJECT NUMBER** 2021  
**DATE STARTED** 6/12/20 **COMPLETED** 6/12/20  
**DRILLING CONTRACTOR** Holt Drilling  
**DRILLING METHOD** Mobile B59-HSA  
**LOGGED BY** V. Atkins **CHECKED BY** S. Flowers  
**NOTES** Temporary well installed at borehole location.

**PROJECT NAME** FL-358  
**PROJECT LOCATION** Federal Way, WA  
**GROUND ELEVATION** 425.06 ft MSL **HOLE SIZE** 8 5/8"  
**GROUND WATER LEVELS:**  
 ▽ **AT TIME OF DRILLING** 10.00 ft / Elev 415.06 ft  
 ▼ **AT END OF DRILLING** 7.60 ft / Elev 417.46 ft  
**AFTER DRILLING** ---

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DEPTH (ft)	SAMPLE TYPE NUMBER	BLOW COUNTS (N VALUE)	ENVIRONMENTAL DATA	GRAPHIC LOG	MATERIAL DESCRIPTION	WELL DIAGRAM
0						
2.5	SPT S1	10-10-30/0"	PID = 0		(SP) Very dense, yellowish-brown SAND (FILL), grading to gray silty sand with gravel. Moist, no apparent odor or staining.	
5	SPT S2	23-35-45 (80)	PID = 0		(SM) Very dense, gray silty SAND with gravel, trace oxidation, moist, no apparent odor or staining.	
6	SPT S3	16-32-40 (72)	PID = 0		Grading to very dense red-brown silty SAND at 6 ft. Trace organics, trace oxidation. Moist, no apparent odor or staining.	
7.6	SPT S4	50/4"	PID = 0		(SM) Limited recovery. Very dense gray silty SAND with gravel, wet, no apparent odor or staining.	
10	SPT S5	13-20-30 (50)	PID = 0		(ML) Very dense, gray silty SAND with gravel, grading at 11 ft to hard brown SILT with sand. Wet, no apparent odor or staining.	
15	SPT S6	45-50				
20	SPT S7	30-50/5"			No recovery. Very dense.	
22.5	SPT S8	14-20-20 (40)	PID = 0		(SM) Very dense, gray silty SAND with gravel, occasional sandy layers. Wet, no apparent odor or staining.	
25	SPT S9	14-16-18 (34)	PID = 0		(ML) Hard gray SILT with sand, trace clay. Wet, no apparent odor or staining.	
26.5					Bottom of borehole at 26.5 feet.	



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# BORING NUMBER 358-B12

**CLIENT** Kiewit/Sound Transit  
**PROJECT NUMBER** 2021  
**DATE STARTED** 6/10/20 **COMPLETED** 6/10/20  
**DRILLING CONTRACTOR** Holt Drilling  
**DRILLING METHOD** Mobile B59-HSA  
**LOGGED BY** V. Atkins **CHECKED BY** S. Flowers  
**NOTES**

**PROJECT NAME** FL-358  
**PROJECT LOCATION** Federal Way, WA  
**GROUND ELEVATION** 425.74 ft MSL **HOLE SIZE** 8 5/8"  
**GROUND WATER LEVELS:**  
 ▽ **AT TIME OF DRILLING** 19.00 ft / Elev 406.74 ft  
 ▼ **AT END OF DRILLING** 12.00 ft / Elev 413.74 ft  
**AFTER DRILLING** ---

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DEPTH (ft)	SAMPLE TYPE NUMBER	BLOW COUNTS (N VALUE)	ENVIRONMENTAL DATA	GRAPHIC LOG	MATERIAL DESCRIPTION	WELL DIAGRAM
0						
	▲ SPT S1	7-21-23 (44)	PID = 0		(SP) Dense, yellowish-brown SAND with gravel, trace silt, moist, (FILL). No apparent odor or staining.	420.7
5	▲ SPT S2	11-14-13 (27)	PID = 0		5.0	
	▲ SPT S3	5-17-18 (35)	PID = 0.1		(ML) Hard, gray SILT with sand, trace organics, gravelly at 6.5 ft. Moist, no apparent odor or staining.	415.7
10	▲ SPT S4	10-17-13 (30)	PID = 2.5		10.0	
	▲ SPT S5	13-14-20 (34)	PID = 2.1		(ML) Hard, gray-green to yellow-brown SILT with sand, trace fine gravel and clay. Moist, no apparent odor or staining.	410.7
15	▲ SPT S6	20-40-29 (69)	PID = 0.4		15.0	
	▲ SPT S7	25-30-50/5"	PID = 0.8		(ML) Limited recovery. Hard, gray-green SILT with sand, trace fine gravel and clay. Moist, no apparent odor or staining.	405.7
20	▲ SPT S8	40-50/4"	PID = 0		20.0	
	▲ SPT S9	30-50/3"	PID = 0		(ML) Hard, gray SILT with sand and gravel. Grading to wet, no apparent odor or staining.	400.7
25	▲ SPT S10	32	PID = 0		25.0	
					(SM) Very dense, brown silty SAND with gravel. Wet, no apparent odor or staining.	395.7
30					30.0	
					(ML) Hard, gray SILT, trace sand and fine gravel. Moist, no apparent odor or staining.	390.1
35					35.6	
Bottom of borehole at 35.6 feet.						



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# BORING NUMBER 358-B13

**CLIENT** Kiewit/Sound Transit  
**PROJECT NUMBER** 2021  
**DATE STARTED** 6/11/20 **COMPLETED** 6/11/20  
**DRILLING CONTRACTOR** Holt Drilling  
**DRILLING METHOD** Mobile B59-HSA  
**LOGGED BY** V. Atkins **CHECKED BY** S. Flowers  
**NOTES**

**PROJECT NAME** FL-358  
**PROJECT LOCATION** Federal Way, WA  
**GROUND ELEVATION** 425.51 ft MSL **HOLE SIZE** 8 5/8"  
**GROUND WATER LEVELS:**  
 ▽ **AT TIME OF DRILLING** 11.60 ft / Elev 413.91 ft  
 ▼ **AT END OF DRILLING** 12.00 ft / Elev 413.51 ft  
**AFTER DRILLING** ---

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DEPTH (ft)	SAMPLE TYPE NUMBER	BLOW COUNTS (N VALUE)	ENVIRONMENTAL DATA	GRAPHIC LOG	MATERIAL DESCRIPTION	WELL DIAGRAM
0						
2.5	SPT S1	13-12-14 (26)	PID = 0		(SP) Medium dense, brown medium SAND with gravel, moist to wet (FILL). No apparent odor or staining.	<p>Temporary well installed 6/11/2020.</p>
5	SPT S2	23-39-50 (89)	PID = 0		(SM) Very dense, gray silty SAND with gravel, trace oxidation, moist, no apparent odor or staining.	
7.5	SPT S3	23-42-28 (70)	PID = 0		Moist, no apparent odor or staining.	
10	SPT S4	6-4-3 (7)	PID = 0		(SM) Loose, gray, silty SAND grading at 8 ft to soft red-brown SILT and PEAT. Wet, no apparent odor or staining.	
15	SPT S5	12-36-28 (64)	PID = 0		(SM) Very dense, gray-green silty SAND with gravel, grading moist to wet. No apparent odor or staining.	
20	SPT S6	2-17-18 (35)	PID = 0		(ML) Stiff, yellow-brown SILT, trace clay and gravel, trace oxidation, moist to wet, no apparent odor or staining.	
25	SPT S7	32-63-90 (153)	PID = 0		(SM) Very dense, gray to olive-brown silty SAND with gravel, trace oxidation, wet, no apparent odor or staining.	
26.5	SPT S8	19-50-34 (84)	PID = 0		(SM) Very dense, olive-brown silty SAND with gravel, trace oxidation, wet, no apparent odor or staining.	

Bottom of borehole at 26.5 feet.



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# BORING NUMBER 358-B14

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**CLIENT** Kiewit/Sound Transit  
**PROJECT NUMBER** 2021  
**DATE STARTED** 6/11/20 **COMPLETED** 6/11/20  
**DRILLING CONTRACTOR** Holt Drilling  
**DRILLING METHOD** Mobile B59-HSA  
**LOGGED BY** V. Atkins **CHECKED BY** S. Flowers  
**NOTES**

**PROJECT NAME** FL-358  
**PROJECT LOCATION** Federal Way, WA  
**GROUND ELEVATION** 426.47 ft MSL **HOLE SIZE** 8 5/8"  
**GROUND WATER LEVELS:**  
 ▽ **AT TIME OF DRILLING** 14.00 ft / Elev 412.47 ft  
 ▼ **AT END OF DRILLING** 7.80 ft / Elev 418.67 ft  
**AFTER DRILLING** ---

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DEPTH (ft)	SAMPLE TYPE NUMBER	BLOW COUNTS (N VALUE)	ENVIRONMENTAL DATA	GRAPHIC LOG	MATERIAL DESCRIPTION	WELL DIAGRAM
0					(GP) Recycled concrete (FILL).	
5.0	SPT S1	30-12-14 (26)	PID = 0		(SM) Limited recovery. Medium dense gray silty SAND, Moist, trace oxidation, no apparent odor or staining.	<p>Temporary well installed 6/11/2020.</p>
7.5	SPT S2	27-38-28 (66)	PID = 0		(SM) Very dense, gray-brown silty SAND with gravel, trace oxidation, moist, no apparent odor or staining.	
10.0	SPT S3	12-12-8 (20)	PID = 0		(ML) Stiff, yellow-brown SILT with sand, trace fine gravel, moist, no apparent odor or staining.	
14.0	SPT S4	10-22-22 (44)	PID = 0		(ML) Medium dense to very dense brown SILT with sand, grading to silty SAND with gravel. Wet, trace oxidation, no apparent odor or staining.	
15.0	SPT S5	12-20-25 (45)	PID = 0			
20.0	SPT S6	60-50/3"	PID = 0		(SM) Very dense, yellow-brown silty SAND with gravel. Wet, no apparent odor or staining. Slight heave.	
25.0	SPT S7	32-33-40 (73)	PID = 0		(ML) Hard, brown grading to gray SILT with sand and fine gravel. Wet grading to moist, no apparent odor or staining. Slight heave.	
30.0	SPT S8	38-50	PID = 0		(ML) Hard, gray SILT with fine gravel. Moist, no apparent odor or staining.	
Bottom of borehole at 31.0 feet.						



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# BORING NUMBER 358-B15

**CLIENT** Kiewit/Sound Transit  
**PROJECT NUMBER** 2021  
**DATE STARTED** 6/11/20 **COMPLETED** 6/11/20  
**DRILLING CONTRACTOR** Holt Drilling  
**DRILLING METHOD** Mobile B59-HSA  
**LOGGED BY** V. Atkins **CHECKED BY** S. Flowers  
**NOTES**

**PROJECT NAME** FL-358  
**PROJECT LOCATION** Federal Way, WA  
**GROUND ELEVATION** 425.61 ft MSL **HOLE SIZE** 8 5/8"  
**GROUND WATER LEVELS:**  
 ▽ **AT TIME OF DRILLING** 10.00 ft / Elev 415.61 ft  
 ▼ **AT END OF DRILLING** 8.90 ft / Elev 416.71 ft  
**AFTER DRILLING** ---

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DEPTH (ft)	SAMPLE TYPE NUMBER	BLOW COUNTS (N VALUE)	ENVIRONMENTAL DATA	GRAPHIC LOG	MATERIAL DESCRIPTION	WELL DIAGRAM
0						
2.5	SPT S1	15-22-19 (41)			(SP) Dense, yellow-brown medium SAND with gravel, moist, (FILL). No apparent odor or staining.	
5.0	SPT S2	37-46-32 (78)			(SP) Very dense, yellow-brown medium SAND with gravel grading at 3 ft to dense, gray, silty SAND with wood fragments. Moist, no apparent odor or staining.	
7.5	SPT S3	18-30-35 (65)			(SM) Very dense, gray silty SAND with gravel, moist, no apparent odor or staining.	
10.0	SPT S4	26-28-23 (51)			(SM) Very dense, gray silty SAND with organics. Moist, no apparent odor or staining.	
12.5	SPT S5	10-22-13 (35)			(SM) Dense, gray silty SAND with gravel, grading wet, no apparent odor or staining.	
15.0	SPT S6	12-20-25 (45)			(ML) Stiff, brown SILT with sand grading to SILT, trace clay, occasional fine sand seams. Wet, no apparent odor or staining.	
20.0	SPT S7	10-12-18 (30)			(ML) Stiff, brown SILT with sand and gravel, occasional fine sand seams. Wet, no apparent odor or staining.	
25.0	SPT S8	12-32-25 (57)			(SM) Dense, brown silty SAND with gravel. Wet, no apparent odor or staining.	
26.5					Bottom of borehole at 26.5 feet.	

Bottom of borehole at 26.5 feet.

**APPENDIX D**  
**2022 Shannon and Wilson Investigation Report**



# Transmittal

**Contract No.:** RTA/CN 0009-17  
**Project Title:** Federal Way Link Extension - F200  
**Date:** 23 November 2022, 01:27:24 PM -8:00  
**CRE Number:** F200-CRE-11067 SUB PR 021003-021.001 FL358 Monitoring Wells Installation and Q1 Data Report - Clean Copy  
**To:** Brian Martin, Sound Transit  
**From:** Erik Nelson, Kiewit Infrastructure West Co.  
**Subject:** Well Installation and First Quarter Data Report - FL-358 Monitoring Wells - Final - Clean Copy

**Message:**

See attached Well Installation and First Quarter Data Report - FL-358 Monitoring Wells - Final - Clean Copy

**Attachments:**

[Click here to download all Transmittal files.](#)

Click on Document Nos to download them individually.

Item	Document No	Rev	Sts	Title
1	<a href="#">KIEWIT-PRODDAT-00177</a>	00	IFI	Well Installation and First Quarter Data Report - FL-358 Monitoring Wells - Final - Clean Copy

**Cc:** F200 @soundtransit.org, Sound Transit  
F200FODC @soundtransit.org, Sound Transit  
Harrison Cross, Sound Transit  
Slava Kurkov, O'Neill Service Group  
Andrea Scheele, Kiewit Infrastructure West Co.

**Sent by:** Emily Nantt, Kiewit Infrastructure West Co.

**InEight Reference Number:** TRN-KIEWIT-ST-05409

SUBMITTED TO:  
Kiewit  
33930 Weyerhaeuser Way S.  
Federal Way, WA 98003

BY:  
Shannon & Wilson  
400 N. 34th Street, Suite 100  
Seattle, WA 98103

(206) 632-8020  
[www.shannonwilson.com](http://www.shannonwilson.com)

WELL INSTALLATION AND FIRST QUARTER DATA REPORT  
FL358 Monitoring Wells  
FEDERAL WAY, WASHINGTON

Submitted To: Kiewit  
33930 Weyerhaeuser Way S.  
Federal Way, WA 98003  
Attn: Mr. Ryan Anderson

Subject: WELL INSTALLATION AND FIRST QUARTER DATA REPORT, FL358  
MONITORING WELLS, FEDERAL WAY, WASHINGTON

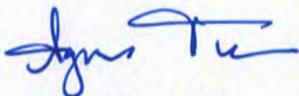
Shannon & Wilson prepared this report and participated in this project as a consultant to Kiewit under our contract for geotechnical and environmental services (Purchase Order No. 7300004630; Change Order No. 5). Our scope of services was specified in CNRFP 059 Rev. 1 FL358 Monitoring Wells (CNRFP), dated January 28, 2022. The scope of services included implementation of the FL358 Remedial Investigation (RI) Work Plan (Work Plan) developed for the FL358 Site and dated December 22, 2021 (GeoEngineers, 2021).

This report presents the results of the RI Work Plan activities undertaken at the FL358 Site, including the analytical results of soil and groundwater sampling. This report is the first reporting requirement stated in the Request for Proposal and was prepared by the undersigned. Previous data transmittals have been delivered electronically.

We appreciate the opportunity to be of service to you on this project. If you have questions concerning this report, or we may be of further service, please contact us.

Sincerely,

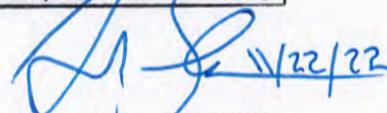
SHANNON & WILSON



Agnes Tirao, PE  
Senior Associate



Joseph Russell Sawdey



Joseph Sawdey, LG, LHG  
Senior Hydrogeologist

JXS:ACT:GJB/jxs:act

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Important Information

# 1 INTRODUCTION

On behalf of Kiewit, Shannon & Wilson prepared this Final Data Report to present soil and groundwater investigation data collected from the former Y-Pay Mor dry cleaning facility located in Federal Way, Washington (Site). The investigation activities were conducted to implement the FL358 Remedial Investigation (RI) Work Plan (Work Plan) (GeoEngineers, 2021<sup>1</sup>), excluding specific elements as outlined in the CNRFP 059 Rev. 1 FL358 Monitoring Wells (CNRFP). The location of the Site is shown in Figure 1.

Our scope of services for the collection of the environmental data set presented herein included installation, construction, and development of 11 new monitoring wells; collection of soil samples from select monitoring well borings for chemical and physiochemical analyses; groundwater elevation monitoring; collection of groundwater samples for chemical and geochemical analyses at each of the new wells; review and validation of laboratory analytical data; and preparation of this report. The field activities implemented are discussed in the following sections.

# 2 FIELD ACTIVITIES

Field activities and standard investigation methods, including sample collection, sample handling, decontamination methods, and investigation-derived waste (IDW), are described in the following subsections. Sample collection and documentation were completed in accordance with the RI Work Plan Sampling and Analysis Plan (SAP) (GeoEngineers, 2021) and (where applicable) Shannon & Wilson's standard operating procedures.

## 2.1 Health and Safety

A site-specific Health and Safety Plan (HASP) was prepared consistent with the requirements of the CNRFP and the Washington State Division of Occupational Safety and Health Hazardous Waste Operations Regulation (Washington Administrative Code 296 843). The HASP included a description of the project team, scope of work, site control, site hazard information, site hazard control, decontamination, and emergency response.

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<sup>1</sup> GeoEngineers, 2021, Remedial Investigation Revised Work Plan. Federal Way Link Extension Parcel FL358, Y Pay Mor Drycleaner Site. 2210 South 320th Street, Federal Way, Washington. File No. 4082-039-03. December 22, 2021.

Information about the nearest hospital, including a map with printed driving directions, was also included in the HASP to aide in emergency response.

## 2.2 Utility Locates

Shannon & Wilson placed a public utility locate request to the Washington Utility Notification Center (also accessible by dialing 811) via their online system on June 7, 2022. Prior to drilling, Shannon & Wilson also reviewed available utility maps and performed a private conductible utility locate on June 13, 2022. Due to the presence of nearby mapped but unmarked utilities, boring locations for monitoring wells FL358-MW7 and FL358-MW9 were vacuum-cleared for utilities using a Vactor truck prior to drilling.

## 2.3 Well Installation and Construction

During June 13 through 22, 2022, the 11 new monitoring wells were drilled and installed by a licensed driller with Holt Services of Edgewood, Washington, and overseen by Shannon & Wilson. Drilling was performed using sonic drilling methods with a Terra Sonic 150 Compact Crawler equipped with a continuous core soil sampling system (refer to Section 2.6.1 further detailing soil sample collection methods). With the exception of the shallow monitoring well FL358-MW5A (see next paragraph), the total drilling depth for each well was selected based on the observed depth to the hard silt layer at each well location. The depth to the hard silt layer ranged from 33 to 40 feet below ground surface (bgs) and drilling for each monitoring well (except FL358-MW5A, drilled to 27 feet bgs) was advanced a minimum of 2 feet into the hard silt layer to aide geologic identification.

With the exception of monitoring well FL358-MW5A, the wells were installed with the base of each screen either level-with or up to 1 foot into the hard silt layer. Each monitoring well consists of 2-inch Schedule 40 polyvinyl chloride (PVC) blank well casing and machine-slotted screens with 0.010-inch slot width. With the exception of FL358-MW5A and FL358-MW5B, each monitoring well was constructed with 20 feet of screen extending upward from the top of the hard silt layer. FL358-MW5A (shallow) and FL358-MW5B (deep) were installed as a nested well pair to monitor shallow and deep groundwater conditions with 5 feet of screen to allow for vertical separation between the two screened intervals. FL358-MW5A was installed with a screened interval spanning a shallow observed coarse sand and rounded gravel lens thought to be associated with a former stormwater catch basin. FL358-MW5B was installed with the base of the screen 1 foot into the hard silt layer (as the other FL358 monitoring wells, except with only 5 feet of screen).

The annular space of the borehole was filled from total depth of the boring to 2 feet above the top of the well screen with 12x20 industrial sand filter pack. The annular space above the filter pack to approximately 2 feet bgs was filled with hydrated bentonite chips to create

the monitoring well seal. The final 2 feet of annular space was filled with a mixture of 12x20 sand and gravel backfill to allow for installation of the 8-inch, flush-mounted monuments at a later date (e.g., once final surface grade is achieved). Since the monitoring wells have been installed, the PVC wellheads have had concrete pads installed to surround and protect the exposed wellheads. Further, traffic cones and posts surround the wellheads, which have been roped off to serve as a safety perimeter. Once the site is constructed to final grade, Kiewit will retain a licensed driller to trim the PVC wellheads to slightly below grade to install flush-mounted monuments. Following final well construction, each of the FL358 monitoring wells (top of casing and top of monument) will be resurveyed.

The locations of the new monitoring wells are shown in Figure 2. The well construction details, soil conditions observed, soil sample collection intervals, and environmental screening results collected during monitoring well installation are included in Appendix A: Boring Logs.

## 2.4 Well Development

Following monitoring well installation, Shannon & Wilson developed the monitoring wells as described in the RI Work Plan (GeoEngineers, 2021). Well development was performed using a Waterra pump equipped with a surge block attached to the end of the hydrolift tubing, which synchronically surges the well screen and extracts (purges) the sediment laden groundwater. Shannon & Wilson surged and purged the entire length of each of the new well screens at 1-foot intervals and removed over five times the calculated well volume from each well. Due to the abundance of suspended fines, following required well volume removal via surging and purging, Shannon & Wilson removed the surge block and purged the well after allowing time for the settlement of suspended fines prior to collecting the required < 500 nephelometric turbidity unit reading from each well. Well development purge water was stored in 55-gallon steel drums labeled with the monitoring well name and contents per the RI Work Plan.

The well development forms detailing the development of each of the monitoring wells (including total volume removed and final turbidity readings) are included in Appendix B.

## 2.5 Groundwater Level Measurement

Kiewit completed a survey of the monitoring well locations and elevations on June 30, 2022. The horizontal datum was collected in a project datum and has been converted to Washington State Plane North. The horizontal accuracy of the surveyed well locations is +/- 0.1 foot. The vertical datum used is the North American Datum of 1988 (NAVD88) and the vertical accuracy of the surveyed well elevations is +/- 0.01 foot. Survey points for the wells were collected from the rim of the north side of the PVC casing. Monitoring wells and

monument lids will be resurveyed after final grading of the site has been completed and the traffic-rated flush-mounted well monuments are constructed and installed around the PVC wellheads per the RI Work Plan.

Prior to initiating the first quarter of groundwater sampling, on June 27, 2022, Shannon & Wilson measured the depth to groundwater in each of the monitoring wells to the nearest one-hundredth of a foot using an electronic water level meter. The depth to groundwater was measured from the north side of the PVC casing as this marks the location of where each well had been surveyed.

The monitoring well survey data, depth to groundwater measurements, and conversion into groundwater elevations are included in Table 1.

## 2.6 Sample Collection Methods

### 2.6.1 Soil Samples

Continuous soil cores were collected from each boring. Soil cores were logged in general accordance with ASTM D2488, field screened for evidence of potential contamination, and monitored for temperature. Field screening for contamination included visual screening, sheen testing the soils, and headspace vapor screening with a photoionization detector. In addition, soil core temperatures were monitored using an infrared thermometer and recorded on the boring logs to quantify the potential for volatilization of volatile organic compounds (VOCs) that may have occurred during drilling. Soil descriptions, results of field screening, and soil core temperatures at environmental sample locations are included on the boring logs (Appendix A).

#### 2.6.1.1 Environmental Soil Samples

At select monitoring well borings, environmental soil samples were collected from the continuous core for laboratory analysis as described in RI Work Plan (GeoEngineers, 2021). The collected environmental soil samples were submitted to OnSite Environmental Inc. of Redmond, Washington, and analyzed using the U.S. Environmental Protection Agency (EPA) Method 8260 for the following VOCs:

- Tetrachloroethene (PCE),
- Trichloroethene (TCE),
- cis-1,2-dichloroethene (cis-1,2-DCE),
- trans-1,2-dichloroethene (trans-1,2-DCE),
- 1,1-dichloroethene (1,1-DCE), and

- Vinyl chloride.

To minimize the potential volatilization of VOCs prior to sample collection, soil samples were collected as quickly as possible after cutting open the soil core bag. Soil samples for VOC analysis were collected first following EPA Method 5035A via laboratory-supplied, 5-gram disposable plungers. Following collection of sample volume for VOC analyses, an additional 4-ounce jar was filled using a decontaminated spoon for percent moisture analyses required for low-level VOC analysis.

The location of collected and analyzed environmental soil samples is provided in the boring logs included in Appendix A. Results of the environmental soil sample laboratory analyses are presented in Section 3.0.

#### 2.6.1.2 Physiochemical Parameter Soil Samples

Physiochemical soil samples were collected from borings FL358-MW5B and FL358-MW6 per the RI Work Plan (GeoEngineers, 2021). Three physiochemical parameter samples were collected from each of the borings targeting (a) typical soils encountered above the hard silt and (b) from the hard silt unit. Physiochemical analyses were performed on the soil samples by AMTEST of Redmond, Washington, utilizing the following tests:

- Grain-size distribution by ASTM Method D422,
- pH by EPA Method 9045D,
- Bulk density by Standard Method (SM) 2710 (refer to Section 4: Deviations from RI Work Plan), and
- Total organic carbon by SM 9060.

The location of collected and analyzed physiochemical parameter soil samples is provided in the boring logs included in Appendix A. Results from the physiochemical parameter lab are presented in Section 3.0. Soil descriptions in the boring logs (Appendix A) have been updated to reflect grain-size distribution testing results.

#### 2.6.2 Groundwater Samples

Groundwater sampling for the first quarterly event occurred from June 27 to 30, 2022, using low-flow purging and sampling methods. Prior to sampling, groundwater levels were gauged as outlined in Section 2.5. Groundwater samples were collected using a decontaminated bladder pump with a disposable bladder and sample tubing with the tubing outlet positioned at the mid-point of the well screen. Purging of the wells prior to groundwater sample collection was performed per the RI Work Plan (GeoEngineers, 2021) with sample collection following monitored water quality parameter stabilization. The

water quality parameters monitored for stabilization included temperature, pH, electrical conductivity, dissolved oxygen, and oxidation-reduction potential. Parameters were monitored using a YSI Pro Plus or 556 water quality meter. Groundwater samples were submitted to Onsite and analyzed for the following VOCs by EPA Method 8260: PCE, TCE, cis-1,2-DCE, trans-1,2-DCE, 1,1-DCE, and vinyl chloride.

Groundwater samples were also submitted to Onsite for geochemical analyses. Samples were analyzed for the following geochemical parameters by the following testing laboratory methodologies:

- Ammonia by SM 4500-NH<sub>3</sub>,
- Total organic carbon by SM 5310B,
- Biological oxygen demand by SM 5210B,
- Total Iron by EPA Method 6010D,
- Ferrous iron by SM3500-Fe B (refer to Section 4: Deviations from RI Work Plan),
- Nitrate and nitrite by EPA Method 353.2, and
- Dissolved methane, ethane, ethene, and acetylene by Method RSK-175.

The purge forms for the first quarterly sampling event are provided in Appendix C. Results of groundwater sample laboratory analyses are presented in Section 3.0.

### 2.6.3 Investigation-Derived Waste Samples

IDW was generated and sampled for characterization as part of the implemented RI Work Plan activities and included soil spoils from drilling, purge water from well development and groundwater sampling, and water used for decontamination of downhole and reusable equipment.

Soil spoils from each of the borings were segregated per boring and stored within 55-gallon drums labeled with the boring/monitoring well identification number. Following completion of the drilling activities, soil IDW samples were collected from each well boring (composited if a well boring was contained in more than one 55-gallon drum) and submitted to OnSite for waste analysis and characterization. The soil IDW samples were analyzed for the following VOCs by EPA Method 8260: PCE, TCE, cis-1,2-DCE, trans-1,2-DCE, 1,1-DCE, and vinyl chloride. The soil IDW samples were also analyzed for the following metals by EPA Method 6010D: Resource Conservation Recovery Act (RCRA) 8 metals, copper, nickel, and zinc. (Note: mercury, one of the RCRA 8 metals, was analyzed for using EPA Method 7471B).

Purge water from each of the new monitoring wells was segregated per boring and stored within 55-gallon drums labeled with the boring/monitoring well identification number. Purge water was characterized for disposal using the groundwater sampling results from each of the respective monitoring wells.

Decontamination water was staged within two 55-gallon drums and labeled as such. Following completion of the drilling activities, decontamination water IDW samples were collected from the labeled drums and submitted to OnSite for waste characterization purposes. The decontamination water IDW samples were analyzed for the following VOCs by EPA Method 8260: PCE, TCE, cis-1,2-DCE, trans-1,2-DCE, 1,1-DCE, and vinyl chloride.

Two laboratory reports with IDW sampling results are included in Appendix D: Laboratory Reports. The two IDW laboratory reports have been assigned Laboratory Reference Numbers 2206-318 and 2206-339.

On September 7, 2022, DH Environmental picked up the drummed IDW from the site following waste profiling the IDW for proper waste designation. The IDW was designated as regulated (i.e., hazardous) and non-regulated (i.e., non-hazardous) waste. The regulated IDW was labeled as such and transported to the Chemical Waste Management, Inc. Facility located in Arlington, Oregon. Sound Transit was on site for review and wet signature of the regulated waste manifests. The non-regulated IDW was labeled as such and transported to the Lafarge Facility in Seattle, Washington. Sound Transit reviewed and e-signed the non-regulated waste manifests prior to the IDW pickup. The waste manifests documenting the waste disposal for the project are included in Appendix E.

#### 2.6.4 Quality Control Samples

Duplicate samples were collected from soil samples at a frequency described in the RI Work Plan SAP/Quality Assurance Project Plan. Dup-220616 was collected from the parent sample FL358-MW6-24-25. Dup-220621 was collected from parent sample FL358-MW9-27-28.

One duplicate sample was collected from the groundwater samples. Duplicate sample FL358-MW100-220628 was collected from parent sample FL358-MW9-220628.

One rinsate sample was collected after decontamination of the reusable sampling equipment each day that environmental soil or groundwater samples were being collected. The samples were collected by pouring deionized water over the decontaminated equipment with recollection of the deionized water submitted for analytical testing for the presence of contamination. The analytical results were used to evaluate for the effectiveness of

decontamination procedures (Section 2.8) and the potential for cross-contamination. PCE was detected during rinsate sampling and implications are discussed in Section 3.3.

Trip blank samples were included with each batch (e.g., cooler) of soil and groundwater samples submitted to the laboratory.

Results of quality control sample laboratory analyses are presented in Section 3.0.

## 2.7 Sample Handling

Soil was transferred from the sonic soil cores using laboratory supplied 5-gram disposable plungers (EPA Method 5035) or decontaminated stainless steel sampling spoons. New nitrile gloves were worn during collection of each individual sample. Non-disposable sampling equipment, including the stainless-steel spoons, was decontaminated between sample locations to reduce potential for cross-contamination.

Soil samples collected for laboratory analysis were placed into pre-cleaned, laboratory-provided bottles. The sample container was labeled using non-water-soluble, indelible ink. The samples were sealed in plastic bags and then placed into a cooler and maintained at 0 to 6 degrees Celsius with wet ice.

## 2.8 Decontamination Methods

The primary objective of the decontamination process was to reduce the potential for the accidental introduction of contaminants to non-contaminated areas and samples.

Equipment used during soil sampling activities was cleaned prior to use and after each use. Soil sampling equipment used during the field activities was decontaminated as follows:

- Removal of gross contamination and particulate matter via an initial water rinse.
- Washed thoroughly with Alconox® detergent solution mixed with distilled or deionized water.
- Rinsed equipment thoroughly with distilled or deionized water.

Reusable equipment used during groundwater sampling activities included the bladder pump. The bladder pump was cleaned prior to initial use, between monitoring wells, and prior to leaving the site. The bladder pump was decontaminated as follows:

- Deconstructed the bladder pump into the basic parts: outer housing, head/upper cap, intake screen/lower cap, center rod, and compression/o-rings.
- Disposed the inflatable bladder after each use.
- Removal of gross contamination and particulate matter from the components.

- Washed thoroughly with Alconox® detergent solution mixed with distilled or deionized water.
- Rinsed equipment thoroughly with distilled or deionized water.

Following decontamination, caution was taken to keep the equipment off the ground by placing the equipment within clean plastic bags or on clean plastic sheeting or equivalent.

## 2.9 Laboratory Analysis and Data Validation

Sample information was recorded on chain-of-custody forms and these forms accompanied the samples to the laboratory. Coolers were sealed and couriered under chain-of-custody procedures to OnSite in Redmond, Washington. Samples were maintained under chain of custody procedures and sample coolers replenished with ice until delivered to the laboratory.

Samples were analyzed for the VOCs as stated in the RI Work Plan by EPA Method 8260 (with low-level detection limits) with a standard turnaround time of seven workdays. The laboratory reports are provided in Appendix D.

Samples were also analyzed for geochemical and physiochemical parameters using the analytical methods as stated in the RI Work Plan (except as noted in Section 4.0: Deviations From the RI Work Plan).

The laboratory data was reviewed and validated relative to the project standards. Based on the results of the data validation, the data sets were evaluated to be of known quality and acceptable for use as qualified. Further, laboratory reporting and quality assurance/quality control procedures were followed as outlined in the RI Work Plan (GeoEngineers, 2021) and there was a usable result for requested analytes for every sample. Data qualifiers assigned during validation by the validator were incorporated into the results tables (Tables 3 and 4). The Data Validation Summary is provided in Appendix F. (Note: Shannon & Wilson has added "B" data qualifiers to the sample results implicated due to PCE detections in rinsate samples during the Q1 groundwater sampling event).

# 3 RESULTS

## 3.1 Soil and Groundwater

Several VOCs were detected in a number of soil samples above the laboratory reporting limits. A summary of the soil analytical results is provided in Table 2.

Several VOCs were detected in a number groundwater samples above the laboratory reporting limits. A summary of the groundwater analytical results is provided in Table 3.

### 3.2 Geochemical and Physiochemical

Geochemical parameters were also sampled for and analyzed at each well. Analytical results of the geochemical parameter concentrations are provided in Table 4.

Physiochemical soil samples were collected from well borings FL358-MW5B and FL358-MW6 at depths indicated on the boring logs. The results of the soil physiochemical parameter testing are provided in Table 5.

### 3.3 Quality Control Samples

Duplicate soil samples were collected and the results are presented in Table 2. VOCs were not detected in the rinsate samples collected during soil sampling and a summary of the analytical results for soil rinsate samples is provided in Table 2.

A duplicate groundwater sample was collected from FL358-MW9 and the results are presented in Table 3.

PCE was detected in rinsate samples collected during the Q1 groundwater sampling event on June 28, 29, and 30 at 0.22, 0.20, and 0.22 micrograms per liter ( $\mu\text{g/L}$ ), respectively. The rinsate sample concentrations are just above or at the laboratory practicable quantitation limit of 0.20  $\mu\text{g/L}$ . Following the Q1 groundwater sampling event, decontamination procedures were reviewed and rinsate detections were identified to likely have been associated with prolonged reuse of the Alconox® decontamination solution. For the Q2 and Q3 groundwater sampling events, Shannon & Wilson will use a new Alconox® decontamination solution daily, at minimum. The rinsate sample PCE detections during Q1 groundwater sampling implicated the groundwater concentrations as flagged in Table 3.

VOCs were not detected in trip blank samples transported with the groundwater samples. A summary of the analytical results for the groundwater sampling duplicate, rinsate, and trip blank samples are also provided in Table 3.

## 4 DEVIATIONS FROM REMEDIAL INVESTIGATION WORK PLAN

- The proposed well locations for FL358-MW7 and FL358-MW12 were moved more than 5 feet from the originally planned locations due to drill rig access issues (e.g., proposed

- locations were under a multi-hundred stack of 80-foot-long rail segments). FL358-MW7 and FL358-MW12 were relocated in consultation with GeoEngineers and relocated well locations were approved via email by the Washington State Department of Ecology prior to drilling.
- Geochemical parameters were analyzed for during the first quarter event. At the direction of GeoEngineers, the geochemical parameters initially planned for November 2022 were analyzed during June 2022.
  - Physiochemical soil samples were intended to be analyzed for density using ASTM D7263. After consultation with ENGEO Laboratories of Danville, California, this density method requires intact and undisturbed cohesive soils. After further consultation with GeoEngineers, the samples remain on hold with ENGEO until the other soil physiochemical parameters have been reviewed.
  - Monitoring wells FL358-MW5A and FL358-MW6 were sampled prior to the RI Work Plan prescribed 72-hour minimum waiting time following well development. FL358-MW5A and FL358-MW6 were sampled 70.4 hours and 70.3 hours following completion of well development. FL358-MW5B was sampled more than 72 hours following completion of well development; however, purging of the well began 71.9 hours following completion of well development. These monitoring wells were sampled slightly prior to the prescribed wait time at the direction of GeoEngineers.
  - Ferrous iron was analyzed using method SM3500-FE B as opposed to the Hach Method 8146 method described in the RI Work Plan. GeoEngineers accepted this substitution so long as the ferrous iron samples were analyzed within the 24-hour method hold time.

## 5 CLOSURE

Shannon & Wilson provided the environmental services described herein using the level of skill normally exercised for similar projects under similar conditions by reputable and competent environmental consultants currently practicing in the area. Shannon & Wilson is not responsible for conditions or consequences arising from relevant facts that were concealed, withheld, or not fully disclosed at the time the letter was prepared.

The sampling was performed to evaluate soil and groundwater for the presence of VOCs. In addition, the sampling was performed to evaluate soil physiochemical parameters and groundwater geochemical conditions. Our observations are specific to the locations, depths, and times of collection as noted in this report and may not be applicable to all areas of the site. No amount of explorations or testing can precisely predict the characteristics, quality, or distribution of subsurface and site conditions.

This report was prepared for the exclusive use of Kiewit and Sound Transit. Shannon & Wilson has prepared the document "Important Information About Your Geotechnical/

Environmental Report" to assist you and others in understanding the use and limitations of this data report.

**Table 1: Survey Data and Groundwater Elevations**

Monitoring Well	Screened Interval (Feet bgs)	Northing (Feet)	Easting (Feet)	Top of Casing Elevation (Feet)	Ground Surface Elevation (Feet)	Date	Depth to Water (Feet Below TOC)	Groundwater Elevation (Feet)
FL358-MW5A	21-26	119140.68	1275744.57	435.70	435.50	6/27/2022	10.14	425.56
FL358-MW5B	32-37	119142.57	1275745.43	435.66	435.50	6/27/2022	9.34	426.32
FL358-MW6	17-37	119109.41	1275728.93	435.64	435.73	6/27/2022	11.59	424.05
FL358-MW7	14-34	119050.86	1275652.84	433.50	433.61	6/27/2022	11.75	421.75
FL358-MW8	18-38	119163.56	1275774.19	435.87	435.67	6/27/2022	9.68	426.19
FL358-MW9	21-41	119067.63	1275764.91	435.50	435.41	6/27/2022	12.52	422.98
FL358-MW10	18-38	118988.24	1275731.25	433.97	433.91	6/27/2022	11.97	422.00
FL358-MW11	15-35	119012.62	1275626.60	432.78	432.94	6/27/2022	11.89	420.89
FL358-MW12	18-38	119127.05	1275653.71	435.11	435.24	6/27/2022	12.21	422.90
FL358-MW13	21-41	119169.87	1275690.53	435.68	435.53	6/27/2022	13.40	422.28
FL358-MW14	19-39	119053.72	1275704.40	434.32	434.44	6/27/2022	12.05	422.27

**NOTES:**

The reference horizontal datum is Washington State Plane North (WSPN) (US Survey Feet). The survey data was collected in a project-specific datum and converted to WSPN.

The reference vertical datum is NAVD88 (US Survey Feet). Ground surface elevations were surveyed prior to drilling each location.

Monuments have not been installed. Monument lid elevation will be surveyed following installation and the survey data reported thereafter.

bgs = below ground surface; NAVD88 = North American Datum of 1988; TOC = top of casing

Table 2: Soil Sampling Results Summary

Monitoring Well	Sample Date	Sample Depth (ft bgs)	Midpoint Sample Elevation (ft)	HVOCs by EPA Method 8260						Moisture Content %
				Tetrachloroethene	Trichloroethene	(cis) 1,2-dichloroethene	(trans) 1,2-dichloroethene	1,1-dichloroethene	Vinyl Chloride	
				0.05	0.03	160	1600	4000	0.67	
				mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	
FL358-MW5B	6/21/2022	21.5-22.5	413.5	0.028	0.0022	0.0018	<0.00078	<0.00078	<0.00078	7%
		24.5-25.5	410.5	1.1	0.038	0.032	<0.00076	<0.00076	<0.00076	8%
		28-29	407.0	11	0.34	0.27	0.0014	<0.00089	0.0024	12%
		33-34	402.0	<0.00091	<0.00091	<0.00091	<0.00091	<0.00091	<0.00091	12%
		36-37	399.0	<0.00084	<0.00084	<0.00084	<0.00084	<0.00084	<0.00084	6%
		37-38	398.0	<0.00079	<0.00079	<0.00079	<0.00079	<0.00079	<0.00079	6%
FL358-MW5A	6/22/2022	23-24	412.0	0.41	0.0091	0.0081	<0.00075	<0.00075	<0.00075	6%
		25-26	410.0	150	0.44	0.25	<0.048	<0.048	<0.048	9%
FL358-MW6	6/21/2022	24-25	411.2	0.10	0.016	0.039	<0.0042	<0.0042	0.0025	13%
		24-25*	411.2	0.16	0.021	0.048	<0.00085	<0.00085	0.0029	15%
		29-30	406.2	<0.00076	<0.00076	<0.00076	<0.00076	<0.00076	<0.00076	9%
		34-35	401.2	<0.00089	<0.00089	0.0018	<0.00089	<0.00089	<0.00089	12%
		36-37	399.2	<0.00082	<0.00082	<0.00082	<0.00082	<0.00082	<0.00082	8%
		37-38	398.2	<0.00095	<0.00095	<0.00095	<0.00095	<0.00095	<0.00095	13%
FL358-MW8	6/15/2022	22-23	413.2	<0.00086	<0.00086	<0.00086	<0.00086	<0.00086	<0.00086	16%
		27-28	408.2	<0.00088	<0.00088	<0.00088	<0.00088	<0.00088	<0.00088	14%
		32-33	403.2	<0.00088	<0.00088	<0.00088	<0.00088	<0.00088	<0.00088	8%
	6/16/2022	36-37	399.2	<0.00086	<0.00086	<0.00086	<0.00086	<0.00086	<0.00086	6%
37-38		398.2	<0.00086	<0.00086	<0.00086	<0.00086	<0.00086	<0.00086	6%	
FL358-MW9	6/16/2022	22-23	412.9	<0.00078	<0.00078	<0.00078	<0.00078	<0.00078	<0.00078	12%
		27-28	407.9	<0.00084	<0.00084	<0.00084	<0.00084	<0.00084	<0.00084	7%
		27-28*	407.9	<0.00074	<0.00074	<0.00074	<0.00074	<0.00074	<0.00074	8%
		31-32	403.9	<0.00088	<0.00088	0.017	<0.00088	<0.00088	<0.00088	16%
		37-38	397.9	<0.00082	<0.00082	<0.00082	<0.00082	<0.00082	<0.00082	9%
		40-41	394.9	<0.00088	<0.00088	<0.00088	<0.00088	<0.00088	<0.00088	7%
		41-42	393.9	<0.00082	<0.00082	<0.00082	<0.00082	<0.00082	<0.00082	8%
FL358-MW14	6/15/2022	23-24	410.9	<0.00092	<0.00092	<0.00092	<0.00092	<0.00092	<0.00092	8%
		28-29	405.9	<0.00076	<0.00076	<0.00076	<0.00076	<0.00076	<0.00076	7%
		33-34	400.9	<0.00074	<0.00074	<0.00074	<0.00074	<0.00074	<0.00074	10%
		37-38	396.9	<0.00098	<0.00098	<0.00098	<0.00098	<0.00098	<0.00098	9%
		38.5-39.5	395.4	<0.00086	<0.00086	<0.00086	<0.00086	<0.00086	<0.00086	9%

Table 2: Soil Sampling Results Summary

Monitoring Well	Sample Date	Sample Depth (ft bgs)	Midpoint Sample Elevation (ft)	HVOCs by EPA Method 8260						Moisture Content %
				Tetrachloroethene	Trichloroethene	(cis) 1,2-dichloroethene	(trans) 1,2-dichloroethene	1,1-dichloroethene	Vinyl Chloride	
MTCA Method A/B Cleanup Level (mg/kg) <sup>1</sup>				0.05	0.03	160	1600	4000	0.67	
Quality Control Samples										
Rinsate	6/15/2022	--		<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	--
	6/16/2022	--		<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	--
	6/21/2022	--		<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	--
	6/22/2022	--		<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	--
Trip Blank	6/15/2022	--		<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	--
	6/16/2022	--		<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	--
	6/21/2022	--		<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	--
	6/22/2022	--		<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	--

NOTES:

1 MTCA Method A/B levels presented were taken from the site Phase II (GeoEngineers, 2017).

\* = duplicate sample

All soil sample results are reported in milligrams per kilogram (mg/kg). Rinsate and trip blank samples are reported in micrograms per liter (µg/L).

**Bold text** indicates the analyte was detected above the laboratory reporting limit.

Highlighted text indicates the analyte was detected above the established cleanup level.

< = less than; bgs = below ground surface; EPA = U.S. Environmental Protection Agency; ft = feet; HVOCs = halogenated volatile organic compounds; MTCA = Model Toxics Control Act

Table 3: Groundwater Sampling Results Summary

		HVOCs by EPA Method 8260					
		Tetrachloroethene	Trichloroethene	(cis) 1,2-dichloroethene	(trans) 1,2-dichloroethene	1,1-dichloroethene	Vinyl Chloride
MTCA Method A/B Cleanup Level (µg/L) <sup>1</sup>		5.0	5.0	16	160	400	0.20
Monitoring Well	Sample Date	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
FL358-MW5A	06/30/2022	91	50	37	<1.0	<1.0	2.3
FL358-MW5B	06/30/2022	3.4	0.83	<0.20	<0.20	<0.20	<0.20
FL358-MW6	06/30/2022	38	100	86	<1.0	<1.0	1.5
FL358-MW7	06/29/2022	0.33 B*	<0.20	6.0	<0.20	<0.20	3.7
FL358-MW8	06/28/2022	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
FL358-MW9	06/28/2022	0.87 B*	2.6 J*	2.6 J*	<0.20	<0.20	<0.20
FL358-MW100 <sup>2</sup>	06/28/2022	0.58 B*	1.8 J*	1.8 J*	<0.20	<0.20	<0.20
FL358-MW10	06/27/2022	<0.20	0.36	7.6	<0.20	<0.20	0.22
FL358-MW11	06/27/2022	<0.20	<0.20	7.7	<0.20	<0.20	4.8
FL358-MW12	06/29/2022	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
FL358-MW13	06/28/2022	8.0	2.9	4.3	<0.20	<0.20	<0.20
FL358-MW14	06/29/2022	<0.20	0.35	16	<0.20	<0.20	2.5
Quality Control Samples							
Trip Blank	06/27/2022	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
	06/28/2022	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
	06/29/2022	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
	06/30/2022	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Rinsate	06/27/2022	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
	06/28/2022	0.22	<0.20	<0.20	<0.20	<0.20	<0.20
	06/29/2022	0.20	<0.20	<0.20	<0.20	<0.20	<0.20
	06/30/2022	0.22	<0.20	<0.20	<0.20	<0.20	<0.20

NOTES:

1 MTCA Method A/B levels presented were taken from the site Phase II (GeoEngineers, 2017).

2 FL358-MW100 is a duplicate sample of FL358-MW9.

All results are reported in micrograms per liter (µg/L).

**Bold text** indicates the analyte was detected above the laboratory reporting limit.

**Highlighted text** indicates the analyte was detected above the established cleanup level.

J\* = Estimated value due to quality control failures. See the data review checklist for additional details. Flag applied by Shannon & Wilson.

B\* = Estimated due to quality control failures. The concentration presented is biased high due to potential cross contamination indicated by low-level PCE detections in the rinsate samples. Flag applied by Shannon & Wilson.

< = less than; EPA = U.S. Environmental Protection Agency; HVOCs = halogenated volatile organic compounds; MTCA = Model Toxics Control Act; PCE = tetrachloroethene

Table 4: Summary of Groundwater Geochemical and Biochemical Parameters (mg/L)

Monitoring Well	Sample Date	Ammonia	Nitrate**	Nitrite**	Total Organic		Ferrous			Ethene	Acetylene	Biochemical Oxygen Demand
					Carbon	Total Iron	Iron	Methane	Ethane			
FL358-MW5A	6/30/2022	<b>0.10</b>	<0.050	<0.020	<b>8.2</b>	<b>0.56</b>	<b>0.690</b>	<b>1.4</b>	<0.00022	<b>0.00079</b>	<b>0.0095</b>	<b>2.5</b>
FL358-MW5B	6/30/2022	<b>0.079</b>	<0.050	<0.020	<b>4.9</b>	<b>0.12</b>	<0.100	<b>0.10</b>	<0.00022	<0.00029	<0.0012	<2.0
FL358-MW6	6/30/2022	<b>0.10</b>	<0.050	<0.020	<b>8.3</b>	<b>0.43</b>	<b>0.588</b>	<b>2.0 JL*</b>	<0.00022 J*	<0.00029 J*	<b>0.0087 J*</b>	<b>3.0</b>
FL358-MW7	6/29/2022	<b>2.9</b>	<b>0.064</b>	<0.020	<b>20</b>	<b>36</b>	<b>42.8</b>	<b>4.1 JL*</b>	<0.00022 J*	<0.00029 J*	<0.0012 J*	<2.0
FL358-MW8	6/28/2022	<0.050	<0.050	<0.020	<b>4.4</b>	<b>0.33</b>	<b>0.457</b>	<b>0.17</b>	<0.00022	<0.00029	<0.0012 J*	<2.0
FL358-MW9	6/28/2022	<b>1.3</b>	<0.050	<0.020	<b>13</b>	<b>59</b>	<b>64.9</b>	<b>6.1 JL*</b>	<0.00022 J*	<0.00029 J*	<0.0012 J*	<b>5.4 JL*</b>
FL358-MW100 <sup>1</sup>	6/28/2022	<b>1.4</b>	<0.050	<0.020	<b>13</b>	<b>57</b>	<b>69.8</b>	<b>5.3 JL*</b>	<0.00022 J*	<0.00029 J*	<0.0012 J*	<b>2.9 JL*</b>
FL358-MW10	6/27/2022	<b>0.57</b>	<0.050	<0.020	<b>10</b>	<b>24</b>	<b>29.3</b>	<b>2.7</b>	<0.00022	<0.00029	<0.0012 J*	<b>4.7</b>
FL358-MW11	6/27/2022	<b>2.8</b>	<b>0.14 J*</b>	<0.020	<b>24</b>	<b>46</b>	<b>55.5</b>	<b>2.9</b>	<0.00022	<0.00029	<0.0012 J*	<b>9.4</b>
FL358-MW12	6/29/2022	<b>4.5</b>	<b>0.082</b>	<0.020	<b>28</b>	<b>70</b>	<b>76.0</b>	<b>3.1</b>	<0.00022	<0.00029	<0.0012	<b>7.8</b>
FL358-MW13	6/28/2022	<0.050	<0.050	<0.020	<b>7.5</b>	<b>2.2</b>	<b>0.985</b>	<b>0.041</b>	<0.00022	<0.00029	<0.0012	<2.0
FL358-MW14	6/29/2022	<b>0.060</b>	<0.050	<0.020	<b>10</b>	<b>7.8</b>	<b>12.0</b>	<b>0.51</b>	<0.00022	<0.00029	<0.0012	<b>3.0</b>
<b>Quality Control Samples</b>												
Trip Blank	06/27/2022	<0.050	<0.050	<0.020	<1.0	<0.050	<0.100	<0.00055	<0.00022	<0.00029	<0.0012	<2.0
Trip Blank	06/28/2022	<0.050	<0.050	<0.020	<1.0	<0.050	<0.100	<0.00055	<0.00022	<0.00029	<0.0012	<2.0
Trip Blank	06/29/2022	<0.050	<0.050	<0.020	<1.0	<0.050	<0.100	<0.00055	<0.00022	<0.00029	<0.0012	<2.0
Trip Blank	06/30/2022	<0.050	<0.050	<0.020	<1.0	<0.050	<0.100	<0.00055	<0.00022	<0.00029	<0.0012	<2.0

NOTES:

1 FL358-MW100 is a duplicate sample of FL358-MW9.

All results are reported in milligrams per liter (mg/L).

Refer to report text for laboratory methods utilized.

\*\*= Units are milligrams per liter (as nitrogen) (mg/L-N).

**Bold text** indicates the analyte was detected above the laboratory reporting limit.

J\* = Estimated result due to quality control failures. See the data review checklist for additional details. Flag applied by Shannon & Wilson.

JL\* = Estimated result, biased low, due to quality control failures. See the data review checklist for additional details. Flag applied by Shannon & Wilson.

< = less than; mg/L-N = milligrams per liter (as nitrogen)

**Table 5: Physiochemical Soil Testing Results**

Monitoring Well	Sample Date	Physiochem Tests				Grain Size Distribution <sup>5</sup>				Soil Identification/Type <sup>6</sup>
		pH <sup>1</sup>	Total Solids (%) <sup>2</sup>	Bulk Density (g/cm <sup>3</sup> ) <sup>3</sup>	Total Organic Carbon (%) <sup>4</sup>	% Gravel	% Sand	% Silt	% Clay	
FL358-MW5-26-27	6/21/2022	7.9	89.2	1.835	0.09	27.4	28.7	27.1	16.8	Silty Sand with Gravel (SM)
FL358-MW5-34-35	6/21/2022	7.3	81.6	1.613	0.17	11.5	34.7	44.0	10.0	Sandy Silt (ML)
FL358-MW5-36-37	6/21/2022	7.8	94.4	1.576	<0.05	34.6	33.7	22.7	9.10	Silty Gravel with Sand (GM)
FL358-MW6-18-19	6/21/2022	7.7	90.9	1.736	0.13	18.1	61.9	10.7	9.40	Silty Sand with Gravel (SM)
FL358-MW6-28-29	6/21/2022	7.7	92.2	1.942	0.09	40.6	32.3	18.8	8.40	Silty Gravel with Sand (GM)
FL358-MW6-37-38	6/21/2022	7.7	88.0	1.294	0.30	3.10	12.1	57.7	27.1	Silt with Sand (ML)

## NOTES:

1 pH by SW-846 9045D

2 Total solids by SM 2540G

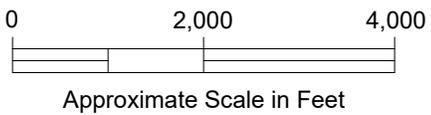
3 Bulk density by SM2710

4 Total organic carbon by SW 846 9060

5 Grain-size distribution data by ASTM D422

6 Soil identification/type as defined by ASTM International D2488

 g/cm<sup>3</sup> = grams per cubic centimeter



Federal Way Transit Center  
2210 South 320th Street  
Federal Way, Washington

**FL358**  
**VICINITY MAP**

November 2022 105474-050



**FIG. 1**

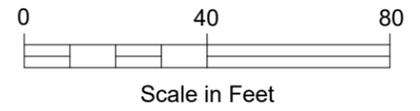


**LEGEND**

- FL358-MW8  Monitoring Well Designation and Approximate Location
-  Parcel Line  
(King County GIS Website)

**NOTES**

1. Monitoring well locations based on survey performed by Kiewit on 6/30/22.
2. Monitoring well network installed June 2022
3. Coordinates were obtained from the Federal Way Link Extension Project datum to the Washington Coordinate System, NAD83/11, North Zone, by subtracting 200,000 from both the northing and easting, then multiplying these coordinates and lengths by the combined scale factor of 1.000010712.



Federal Way Transit Center 2210 South 320th Street Federal Way, Washington	
<b>FL358 MONITORING WELL NETWORK</b>	
November 2022	105474-050
 SHANNON & WILSON, INC. <small>GEOTECHNICAL AND ENVIRONMENTAL CONSULTANTS</small>	<b>FIG. 2</b>

Appendix A  
Boring Logs

APPENDIX A: BORING LOGS

Shannon & Wilson uses a soil identification system modified from the Unified Soil Classification System (USCS). Elements of the USCS and other definitions are provided on this and the following page. Soil descriptions are based on visual-manual procedures (ASTM D2488) and laboratory testing procedures (ASTM D2487), if performed.

### Structure<sup>1</sup>

Interbedded	Alternating layers of varying material or color with layers at least 1/4-inch-thick; singular: bed.
Laminated	Alternating layers of varying material or color with layers less than 1/4-inch-thick; singular: lamination.
Fissured	Breaks along definite planes or fractures with little resistance.
Slickensided	Fracture planes appear polished or glossy; sometimes striated.
Blocky	Cohesive soil that can be broken down into small angular lumps that resist further breakdown.
Lensed	Inclusion of small pockets of different soils, such as small lenses of sand scattered through a mass of clay.
Homogeneous	Same color and appearance throughout.

### Angularity and Shape<sup>1</sup>

Angular	Sharp edges and unpolished planar surfaces.
Subangular	Similar to angular, but with rounded edges.
Subrounded	Nearly planar sides with well-rounded edges.
Rounded	Smoothly curved sides with no edges.
Flat	Width/thickness ratio > 3.
Elongated	Length/width ratio > 3.

### Standard Penetration Test (SPT)<sup>3</sup>

Hammer	140 pounds with a 30-inch free fall. Rope on 6- to 10-inch-diameter cathead 2-1/4 rope turns, > 100 rpm. If automatic hammers are used, blow counts shown on boring logs should be adjusted to account for efficiency of hammer.
Sampler	10 to 30 inches long Shoe I.D. = 1.375 inches Barrel I.D. = 1.5 inches Barrel O.D. = 2 inches
N-Value	Sum blow counts for second and third 6-inch increments. Refusal: 50 blows for 6 inches or less or 10 blows for 0 inch.

### Moisture Content

Dry	Absence of moisture, dusty, dry to the touch.
Moist	Damp but no visible water.
Wet	Visible free water, from below water table.

### Gradation

Poorly Graded	Narrow range of grain sizes present or, within the range of grain sizes present, one or more sizes are missing (Gap Graded). Meets criteria in ASTM D2487, if tested.
Well-Graded	Full range and even distribution of grain sizes present. Meets criteria in ASTM D2487, if tested.

### Cementation<sup>1</sup>

Weak	Crumbles/breaks with handling or slight finger pressure.
Moderate	Crumbles or breaks with considerable finger pressure.
Strong	Will not crumble or break with finger pressure.

### Plasticity<sup>2</sup>

Nonplastic	Cannot roll a 1/8-in. thread at any water content.	PI < 4
Low	A thread can barely be rolled and a lump cannot be formed when drier than the plastic limit.	4 < PI < 10
Medium	A thread is easy to roll and not much time is required to reach the plastic limit. The thread cannot be rerolled after reaching the plastic limit. A lump crumbles when drier than the plastic limit.	10 < PI < 20
High	It takes considerable time rolling and kneading to reach the plastic limit. A thread can be rerolled several times after reaching the plastic limit. A lump can be formed without crumbling when drier than the plastic limit.	PI > 21

### Additional Terms

Mottled	Irregular patches of different colors.
Bioturbated	Soil disturbance or mixing by plants or animals.
Diamict	Nonsorted sediment; sand and gravel in silt and/or clay matrix.
Cuttings	Material brought to surface by drilling.
Slough	Material that caved from sides of borehole.
Sheared	Disturbed texture, mix of strengths.

**Notes:**

<sup>1</sup>Reprinted, with permission, from ASTM D2488 - 09a Standard Practice for Description and Identification of Soils (Visual-Manual Procedure), copyright ASTM International, 100 Barr Harbor Drive, West Conshohocken, PA 19428. A copy of the complete standard may be obtained from ASTM International, www.astm.org.

<sup>2</sup>Adapted, with permission, from ASTM D2488 - 09a Standard Practice for Description and Identification of Soils (Visual-Manual Procedure), copyright ASTM International, 100 Barr Harbor Drive, West Conshohocken, PA 19428. A copy of the complete standard may be obtained from ASTM International, www.astm.org.

<sup>3</sup>Penetration resistances (N-values) shown on boring logs are as recorded in the field and have not been corrected for hammer efficiency, overburden, or other factors.

**Unified Soil Classification System (USCS)**  
Modified From USACE Tech Memo 3-357, ASTM D2487, and ASTM D2488

Major Divisions	Symbol	Typical Identifications			
Coarse-Grained Soils (more than 50% retained on No. 200 sieve)	Gravels (more than 50% of coarse fraction retained on No. 4 sieve)	Gravel (less than 5% fines)	GW  Well-graded Gravel; Well-graded Gravel with Sand		
		GP  Poorly Graded Gravel; Poorly Graded Gravel with Sand			
	Silty or Clayey Gravel (more than 12% fines)	GM  Silty Gravel; Silty Gravel with Sand			
		GC  Clayey Gravel; Clayey Gravel with Sand			
	Sands (50% or more of coarse fraction passes the No. 4 sieve)	Sand (less than 5% fines)	SW  Well-graded Sand; Well-graded Sand with Gravel		
			SP  Poorly Graded Sand; Poorly Graded Sand with Gravel		
		Silty or Clayey Sand (more than 12% fines)	SM  Silty Sand; Silty Sand with Gravel		
			SC  Clayey Sand; Clayey Sand with Gravel		
		Fine-Grained Soils (50% or more passes the No. 200 sieve)	Silt and Clays (liquid limit less than 50)	Inorganic	ML  Silt; Silt with Sand or Gravel; Sandy or Gravelly Silt
				CL  Lean Clay; Lean Clay with Sand or Gravel; Sandy or Gravelly Lean Clay	
Organic	OL  Organic Silt or Clay; Organic Silt or Clay with Sand or Gravel; Sandy or Gravelly Organic Silt or Clay				
Silt and Clays (liquid limit 50 or more)	Inorganic		MH  Elastic Silt; Elastic Silt with Sand or Gravel; Sandy or Gravelly Elastic Silt		
	CH  Fat Clay; Fat Clay with Sand or Gravel; Sandy or Gravelly Fat Clay				
	Organic		OH  Organic Silt or Clay; Organic Silt or Clay with Sand or Gravel; Sandy or Gravelly Organic Silt or Clay		
	Highly Organic Soils	Primarily organic matter, dark in color, and organic odor	PT  Peat or other highly organic soils (see ASTM D4427)		

**Acronyms and Abbreviations**

ATD At Time of Drilling	MgO Magnesium Oxide	psi Pounds per Square Inch
Diam. Diameter	mm Millimeter	PVC Polyvinyl Chloride
Elev. Elevation	MnO Manganese Oxide	rpm Rotations per Minute
ft Feet	NA Not Applicable or Not Available	SPT Standard Penetration Test
FeO Iron Oxide	NP Nonplastic	USCS Unified Soil Classification System
gal Gallons	O.D. Outside Diameter	q <sub>u</sub> Unconfined Compressive Strength
Horiz. Horizontal	OW Observation Well	VWP Vibrating Wire Piezometer
HSA Hollow-Stem Auger	pcf Pounds per Cubic Foot	Vert. Vertical
I.D. Inside Diameter	PID Photoionization Detector	WOH Weight of Hammer
in Inches	PMT Pressuremeter Test	WOR Weight of Rods
lbs Pounds	ppm Parts per Million	Wt Weight

**Well and Backfill Symbols**

	Bentonite Cement Grout
	Bentonite Grout
	Bentonite Chips
	Silica Sand
	Perforated or Screened Casing
	Surface Cement Seal
	Asphalt or Cap
	Slough
	Inclinometer or Non-perforated Casing
	Instrumentation Riser or Electrical Lead
	Vibrating Wire Piezometer with Designation

**Relative Density Cohesionless Soils**

N, SPT, Blows/ft	Relative Density
< 4	Very loose
4 - 10	Loose
10 - 30	Medium dense
30 - 50	Dense
> 50	Very dense

**Relative Consistency Cohesive Soils**

N, SPT, Blows/ft	Relative Consistency
< 2	Very soft
2 - 4	Soft
4 - 8	Medium stiff
8 - 15	Stiff
15 - 30	Very stiff
> 30	Hard

**Percentages<sup>1, 2</sup>**

Trace	< 5%
Few	5 to 10%
Little	15 to 25%
Some	30 to 45%
Mostly	50 to 100%

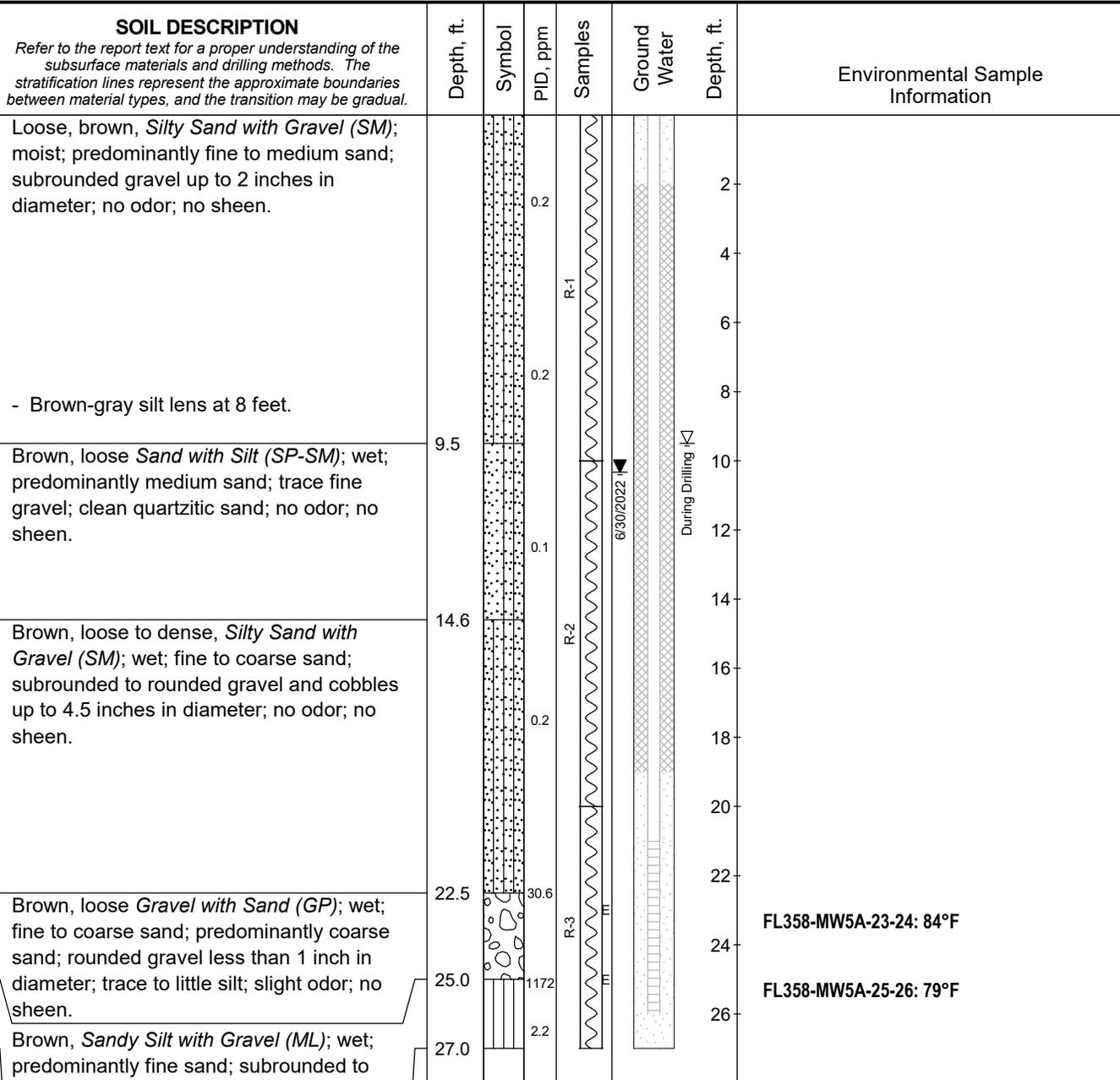
**Notes:**

Dual symbols (symbols separated by a hyphen, i.e., SP-SM, Sand with Silt) are used for soils with between 5% and 12% fines or when the liquid limit and plasticity index values plot in the CL-ML area of the plasticity chart. Graphics shown on the logs for these soil types are a combination of the two graphic symbols (e.g., SP and SM).

Borderline symbols (symbols separated by a slash, i.e., CL/ML, Lean Clay to Silt; SP-SM/SM, Sand with Silt to Silty Sand) indicate that the soil properties are close to the defining boundary between two groups.

No. 4 size = 4.75 mm = 0.187 in.; No. 200 size = 0.075 mm = 0.003 in.

Total Depth: 27 ft. Northing: ~ 119,141 ft. Drilling Method: Sonic Core Hole Diam.: 6 in.  
 Top Elevation: ~ 435.5 ft. Easting: ~ 1,275,745 ft. Drilling Company: Holt Services Rod Diam.: 4-inch  
 Vert. Datum: NAVD88 Station: ~ N/A Drill Rig Equipment: Terra Sonic 150 C.C. Hammer Type: \_\_\_\_\_  
 Horiz. Datum: WA State Plane N Offset: ~ N/A Other Comments: No water/fluid added



CONTINUED NEXT SHEET

LEGEND

- \* Sample Not Recovered
- E Environmental Sample Obtained
- Soil Core (as in Sonic Core Borings)
- Well Screen and Sand Filter
- Bentonite-Cement Grout
- Bentonite Chips/Pellets
- Bentonite Grout
- Ground Water Level ATD
- Ground Water Level in Well

NOTES

- Refer to KEY for explanation of symbols, codes, abbreviations, and definitions.
- Groundwater level, if indicated above, is for the date specified and may vary.
- USCS designation is based on visual-manual classification and selected lab testing.
- Ecology Well Tag: BNL 558.

FL358 Monitoring Wells  
Federal Way, Washington

LOG OF BORING FL358-MW5A

November 2022

105474-050

SHANNON & WILSON, INC.  
Geotechnical and Environmental Consultants

Sheet 1 of 2

MASTER LOG E-ENV - NOT PLOT 105474-050.GPJ SHAN WIL 6/30/22 Rev: JXS Typ: LKN

Total Depth: 27 ft. Northing: ~ 119,141 ft. Drilling Method: Sonic Core Hole Diam.: 6 in.  
 Top Elevation: ~ 435.5 ft. Easting: ~ 1,275,745 ft. Drilling Company: Holt Services Rod Diam.: 4-inch  
 Vert. Datum: NAVD88 Station: ~ N/A Drill Rig Equipment: Terra Sonic 150 C.C. Hammer Type: \_\_\_\_\_  
 Horiz. Datum WA State Plane N Offset: ~ N/A Other Comments: No water/fluid added

<b>SOIL DESCRIPTION</b> <i>Refer to the report text for a proper understanding of the subsurface materials and drilling methods. The stratification lines represent the approximate boundaries between material types, and the transition may be gradual.</i>	Depth, ft.	Symbol	PID, ppm	Samples	Ground Water	Depth, ft.  Environmental Sample Information
rounded gravel and cobbles up to 5 inches in diameter; slight odor; no sheen. - Color changes to gray/blue-gray, photoionization detector readings drop to 2.2 parts per million, less wet (no water yield) at 26.5 feet.  <b>BOTTOM OF BORING COMPLETED 6/22/2022</b>						30  32  34  36  38  40  42  44  46  48  50  52  54

**LEGEND**

- \* Sample Not Recovered
- E Environmental Sample Obtained
- Soil Core (as in Sonic Core Borings)
- Well Screen and Sand Filter
- Bentonite-Cement Grout
- Bentonite Chips/Pellets
- Bentonite Grout
- Ground Water Level ATD
- Ground Water Level in Well

**NOTES**

1. Refer to KEY for explanation of symbols, codes, abbreviations, and definitions.
2. Groundwater level, if indicated above, is for the date specified and may vary.
3. USCS designation is based on visual-manual classification and selected lab testing.
4. Ecology Well Tag: BNL 558.

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Federal Way, Washington

**LOG OF BORING FL358-MW5A**

November 2022

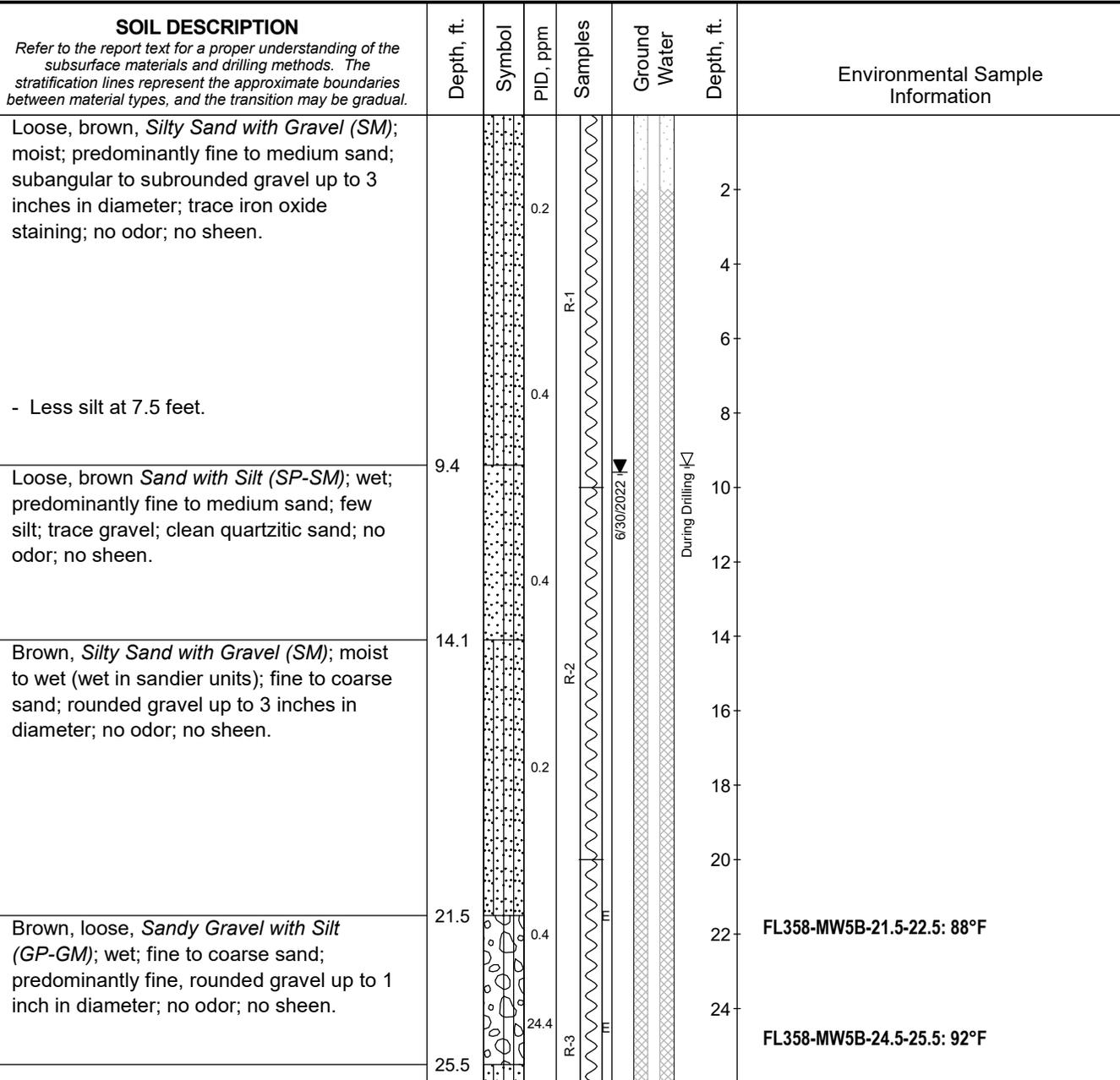
105474-050

**SHANNON & WILSON, INC.**  
Geotechnical and Environmental Consultants

Sheet 2 of 2

MASTER LOG E-ENV - NOT PLOT 105474-050.GPJ SHAN\_WIL\_05/01/22 Rev: JXS Typ: LKN

Total Depth: 40 ft. Northing: ~ 119,143 ft. Drilling Method: Sonic Core Hole Diam.: 6 in.  
 Top Elevation: ~ 435.5 ft. Easting: ~ 1,275,745 ft. Drilling Company: Holt Services Rod Diam.: 4-inch  
 Vert. Datum: NAVD88 Station: ~ N/A Drill Rig Equipment: Terra Sonic 150 C.C. Hammer Type: \_\_\_\_\_  
 Horiz. Datum: WA State Plane N Offset: ~ N/A Other Comments: No water/fluid added



CONTINUED NEXT SHEET

LEGEND

- \* Sample Not Recovered
- E Environmental Sample Obtained
- Soil Core (as in Sonic Core Borings)
- Well Screen and Sand Filter
- Bentonite-Cement Grout
- Bentonite Chips/Pellets
- Bentonite Grout
- Ground Water Level ATD
- Ground Water Level in Well

NOTES

- Refer to KEY for explanation of symbols, codes, abbreviations, and definitions.
- Groundwater level, if indicated above, is for the date specified and may vary.
- USCS designation is based on visual-manual classification and selected lab testing.
- Ecology Well Tag: BNL 558.

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Federal Way, Washington

LOG OF BORING FL358-MW5B

November 2022

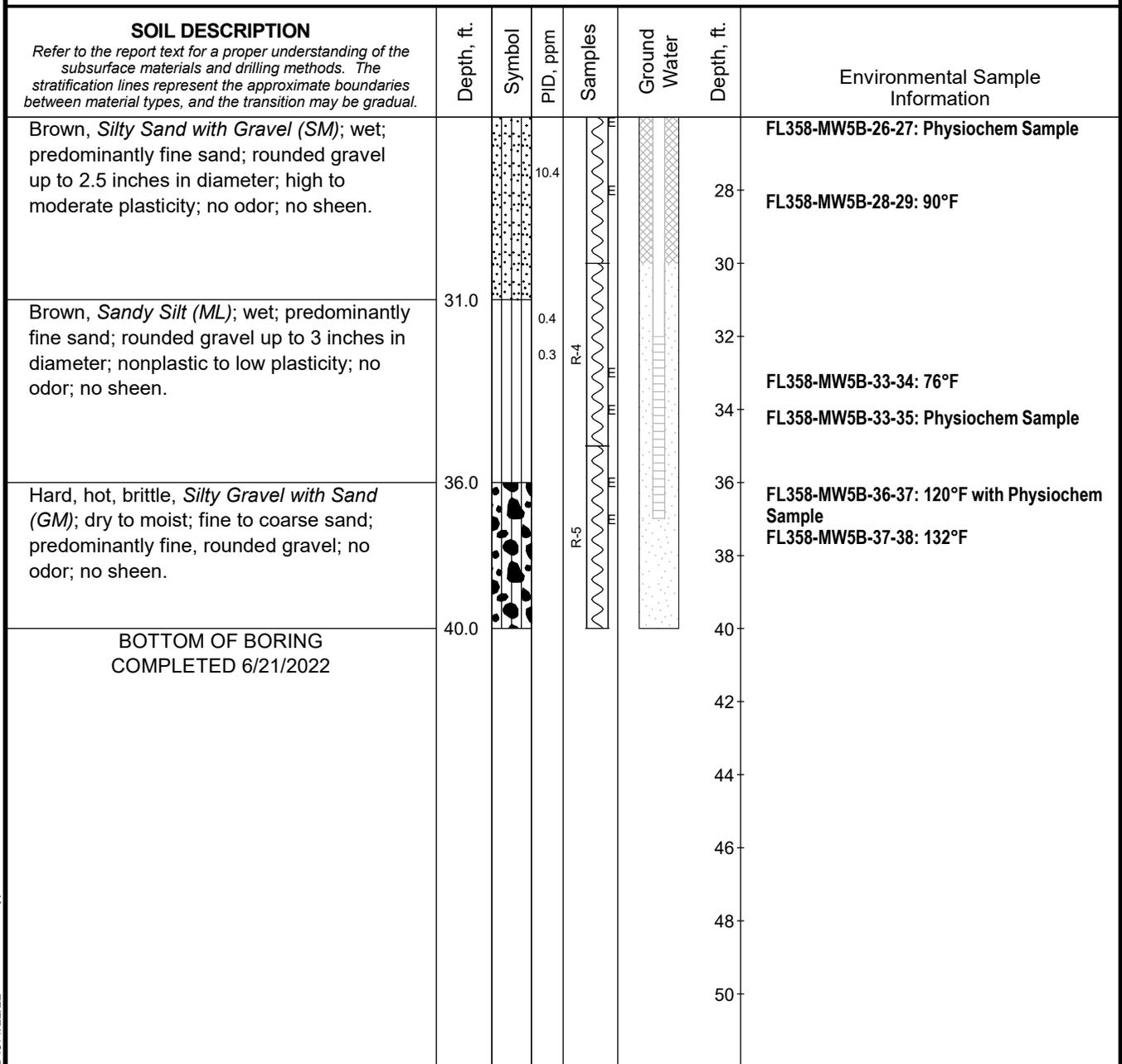
105474-050

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Geotechnical and Environmental Consultants

Sheet 1 of 2

MASTER LOG E-ENV - NOT PLOT 105474-050.GPJ SHAN WIL 6/9/22 Rev: JXS Typ: LKN

Total Depth: 40 ft. Northing: ~ 119,143 ft. Drilling Method: Sonic Core Hole Diam.: 6 in.  
 Top Elevation: ~ 435.5 ft. Easting: ~ 1,275,745 ft. Drilling Company: Holt Services Rod Diam.: 4-inch  
 Vert. Datum: NAVD88 Station: ~ N/A Drill Rig Equipment: Terra Sonic 150 C.C. Hammer Type: \_\_\_\_\_  
 Horiz. Datum: WA State Plane N Offset: ~ N/A Other Comments: No water/fluid added



MASTER LOG E-ENV - NOT PLOT 105474-050.GPJ SHAN\_WIL.GB591 4/23/22 Rev: JXS Typ: LKN

**LEGEND**

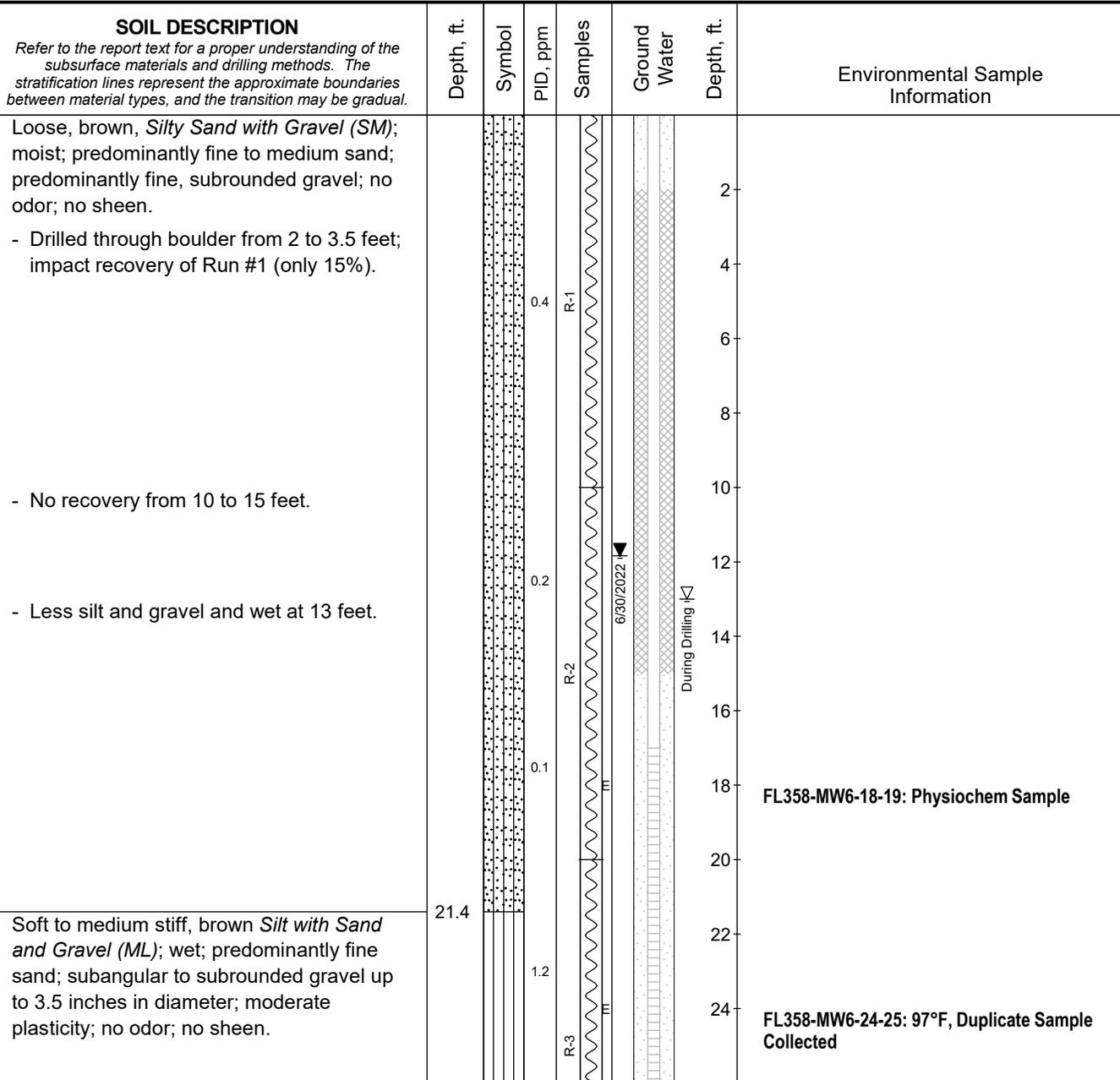
- \* Sample Not Recovered
- E Environmental Sample Obtained
- [Symbol] Soil Core (as in Sonic Core Borings)
- [Symbol] Well Screen and Sand Filter
- [Symbol] Bentonite-Cement Grout
- [Symbol] Bentonite Chips/Pellets
- [Symbol] Bentonite Grout
- ▽ Ground Water Level ATD
- ▼ Ground Water Level in Well

**NOTES**

1. Refer to KEY for explanation of symbols, codes, abbreviations, and definitions.
2. Groundwater level, if indicated above, is for the date specified and may vary.
3. USCS designation is based on visual-manual classification and selected lab testing.
4. Ecology Well Tag: BNL 558.

FL358 Monitoring Wells Federal Way, Washington	
<b>LOG OF BORING FL358-MW5B</b>	
November 2022	105474-050
<b>SHANNON &amp; WILSON, INC.</b> Geotechnical and Environmental Consultants	Sheet 2 of 2

Total Depth: 40 ft. Northing: ~ 119,109 ft. Drilling Method: Sonic Core Hole Diam.: 6 in.  
 Top Elevation: ~ 435.7 ft. Easting: ~ 1,275,729 ft. Drilling Company: Holt Services Rod Diam.: 4-inch  
 Vert. Datum: NAVD88 Station: ~ N/A Drill Rig Equipment: Terra Sonic 150 C.C. Hammer Type: \_\_\_\_\_  
 Horiz. Datum WA State Plane N Offset: ~ N/A Other Comments: No water/fluid added



CONTINUED NEXT SHEET

**LEGEND**

- \* Sample Not Recovered
- E Environmental Sample Obtained
- Soil Core (as in Sonic Core Borings)
- Well Screen and Sand Filter
- Bentonite-Cement Grout
- Bentonite Chips/Pellets
- Bentonite Grout
- Ground Water Level ATD
- Ground Water Level in Well

**NOTES**

1. Refer to KEY for explanation of symbols, codes, abbreviations, and definitions.
2. Groundwater level, if indicated above, is for the date specified and may vary.
3. USCS designation is based on visual-manual classification and selected lab testing.
4. Ecology Well Tag: BNL 558.

FL358 Monitoring Wells  
Federal Way, Washington

**LOG OF BORING FL358-MW6**

November 2022

105474-050

**SHANNON & WILSON, INC.**  
Geotechnical and Environmental Consultants

Sheet 1 of 2

MASTER LOG E-ENV - NOT PLOT 105474-050.GPJ SHAN\_WIL\_05/01/22 Rev: JXS Typ: LKN

Total Depth: 40 ft. Northing: ~ 119,109 ft. Drilling Method: Sonic Core Hole Diam.: 6 in.  
 Top Elevation: ~ 435.7 ft. Easting: ~ 1,275,729 ft. Drilling Company: Holt Services Rod Diam.: 4-inch  
 Vert. Datum: NAVD88 Station: ~ N/A Drill Rig Equipment: Terra Sonic 150 C.C. Hammer Type: \_\_\_\_\_  
 Horiz. Datum: WA State Plane N Offset: ~ N/A Other Comments: No water/fluid added

SOIL DESCRIPTION <i>Refer to the report text for a proper understanding of the subsurface materials and drilling methods. The stratification lines represent the approximate boundaries between material types, and the transition may be gradual.</i>	Depth, ft.	Symbol	PID, ppm	Samples	Ground Water	Depth, ft.	Environmental Sample Information
Brown, <i>Silty Gravel with Sand (GM)</i> ; moist to wet; subangular to subrounded gravel up to 3.5 inches in diameter; predominantly fine sand; no odor; no sheen.	26.0		0.5	E		28	FL358-MW6-28-29: Physiochem Sample FL358-MW6-29-30: 92°F
Brown, <i>Sandy Silt with Gravel (ML)</i> ; moist to wet; predominantly fine sand; subrounded to rounded gravel and cobbles up to 4 inches in diameter; low plasticity; iron oxide staining in places; no odor; no sheen.	30.0		0.1	R-4 E		30 32 34	FL358-MW6-34-35: 96°F
Hard, gray, hot, brittle <i>Silt with Sand (ML)</i> ; dry; fine to coarse sand; predominantly fine, trace subrounded to rounded gravel; no odor; no sheen.	36.0		0.1	R-5 E		36 38	FL358-MW6-36-37: 118°F FL358-MW6-37-38: 101°F with Physiochem Sample
BOTTOM OF BORING COMPLETED 6/21/2022	40.0					40 42 44 46 48 50	

**LEGEND**

- \* Sample Not Recovered
- E Environmental Sample Obtained
- Soil Core (as in Sonic Core Borings)
- Well Screen and Sand Filter
- Bentonite-Cement Grout
- Bentonite Chips/Pellets
- Bentonite Grout
- Ground Water Level ATD
- Ground Water Level in Well

**NOTES**

1. Refer to KEY for explanation of symbols, codes, abbreviations, and definitions.
2. Groundwater level, if indicated above, is for the date specified and may vary.
3. USCS designation is based on visual-manual classification and selected lab testing.
4. Ecology Well Tag: BNL 558.

FL358 Monitoring Wells  
Federal Way, Washington

**LOG OF BORING FL358-MW6**

November 2022

105474-050

**SHANNON & WILSON, INC.**  
Geotechnical and Environmental Consultants

Sheet 2 of 2

MASTER LOG E-ENV - NOT PLOT 105474-050.GPJ SHAN\_WIL.G5991 11/23/22 Rev: JXS Typ: LKN

Total Depth: 35 ft. Northing: ~ 119,051 ft. Drilling Method: Sonic Core Hole Diam.: 6 in.  
 Top Elevation: ~ 433.6 ft. Easting: ~ 1,275,653 ft. Drilling Company: Holt Services Rod Diam.: 4-inch  
 Vert. Datum: NAVD88 Station: ~ N/A Drill Rig Equipment: Terra Sonic 150 C.C. Hammer Type: \_\_\_\_\_  
 Horiz. Datum: WA State Plane N Offset: ~ N/A Other Comments: No water/fluid added

SOIL DESCRIPTION <i>Refer to the report text for a proper understanding of the subsurface materials and drilling methods. The stratification lines represent the approximate boundaries between material types, and the transition may be gradual.</i>	Depth, ft.	Symbol	PID, ppm	Samples	Ground Water	Depth, ft.	Environmental Sample Information
Air knife vacuum clearance to 5 feet below ground surface to clear location of nearby utilities.						2	
			0.1			4	
Loose, grayish-brown to brown, <i>Silty Sand with Gravel (SM)</i> ; moist; predominantly fine sand; subrounded gravel up to 2 inches in diameter; no odor; no sheen.	5.0		0.1	R-1		6	
			0.1			8	
			0.1			10	
Bluish-gray to gray, <i>Sandy Silt with Gravel (ML)</i> ; wet; fine to medium sand; subrounded to rounded gravel up to 2.5 inches in diameter; low to moderate plasticity; no odor; no sheen.	10.8		0.1	R-2		12	
			0.1			14	
- Color changes to dark brown and black with high organic content and sulfur-like odor at 16 feet.	17.4		0			16	
			0			18	
Light gray to gray, <i>Sandy Silt with Gravel (ML)</i> ; wet; fine to coarse sand; subrounded gravel up to 1 inch in diameter; no odor; no sheen.	22.3		0.1			20	
			0.1			22	
Loose, grayish-brown, <i>Silty Sand with Gravel (SM)</i> ; wet; fine to coarse sand; subrounded to rounded gravel up to 1 inch in diameter; no odor; no sheen.	24.3		0.1	R-3		24	

CONTINUED NEXT SHEET

**LEGEND**

- \* Sample Not Recovered
- Soil Core (as in Sonic Core Borings)
- Well Screen and Sand Filter
- Bentonite-Cement Grout
- Bentonite Chips/Pellets
- Bentonite Grout
- Ground Water Level ATD
- Ground Water Level in Well

**NOTES**

1. Refer to KEY for explanation of symbols, codes, abbreviations, and definitions.
2. Groundwater level, if indicated above, is for the date specified and may vary.
3. USCS designation is based on visual-manual classification and selected lab testing.
4. Ecology Well Tag: BNL 558.

FL358 Monitoring Wells  
Federal Way, Washington

**LOG OF BORING FL358-MW7**

November 2022

105474-050

**SHANNON & WILSON, INC.**  
Geotechnical and Environmental Consultants

Sheet 1 of 2

MASTER LOG E-ENV - NOT PLOT 105474-050.GPJ SHAN\_WIL.GB 11/22 Rev: JXS Typ: LKN

Total Depth: 35 ft. Northing: ~ 119,051 ft. Drilling Method: Sonic Core Hole Diam.: 6 in.  
 Top Elevation: ~ 433.6 ft. Easting: ~ 1,275,653 ft. Drilling Company: Holt Services Rod Diam.: 4-inch  
 Vert. Datum: NAVD88 Station: ~ N/A Drill Rig Equipment: Terra Sonic 150 C.C. Hammer Type: \_\_\_\_\_  
 Horiz. Datum WA State Plane N Offset: ~ N/A Other Comments: No water/fluid added

SOIL DESCRIPTION <i>Refer to the report text for a proper understanding of the subsurface materials and drilling methods. The stratification lines represent the approximate boundaries between material types, and the transition may be gradual.</i>	Depth, ft.	Symbol	PID, ppm	Samples	Ground Water	Depth, ft.	Environmental Sample Information
Light brown, <i>Sandy Silt with Gravel (ML)</i> ; wet; predominantly fine sand; subrounded to rounded gravel and cobbles up to 4 inches in diameter; no odor; no sheen.  - Decreasing gravel content at 30 feet.			0.1	R-4		28	
Hard, gray, brittle, hot, <i>Sandy Silt with Gravel (ML)</i> ; dry; no odor; no sheen.	33.0		0.2			30	
BOTTOM OF BORING COMPLETED 6/20/2022	35.0		0			34	
						36	
						38	
						40	
						42	
						44	
						46	
						48	
						50	

**LEGEND**

- \* Sample Not Recovered
- ☐ Soil Core (as in Sonic Core Borings)
- ☐ Well Screen and Sand Filter
- ☐ Bentonite-Cement Grout
- ☐ Bentonite Chips/Pellets
- ☐ Bentonite Grout
- ▽ Ground Water Level ATD
- ▼ Ground Water Level in Well

**NOTES**

1. Refer to KEY for explanation of symbols, codes, abbreviations, and definitions.
2. Groundwater level, if indicated above, is for the date specified and may vary.
3. USCS designation is based on visual-manual classification and selected lab testing.
4. Ecology Well Tag: BNL 558.

FL358 Monitoring Wells  
Federal Way, Washington

**LOG OF BORING FL358-MW7**

November 2022

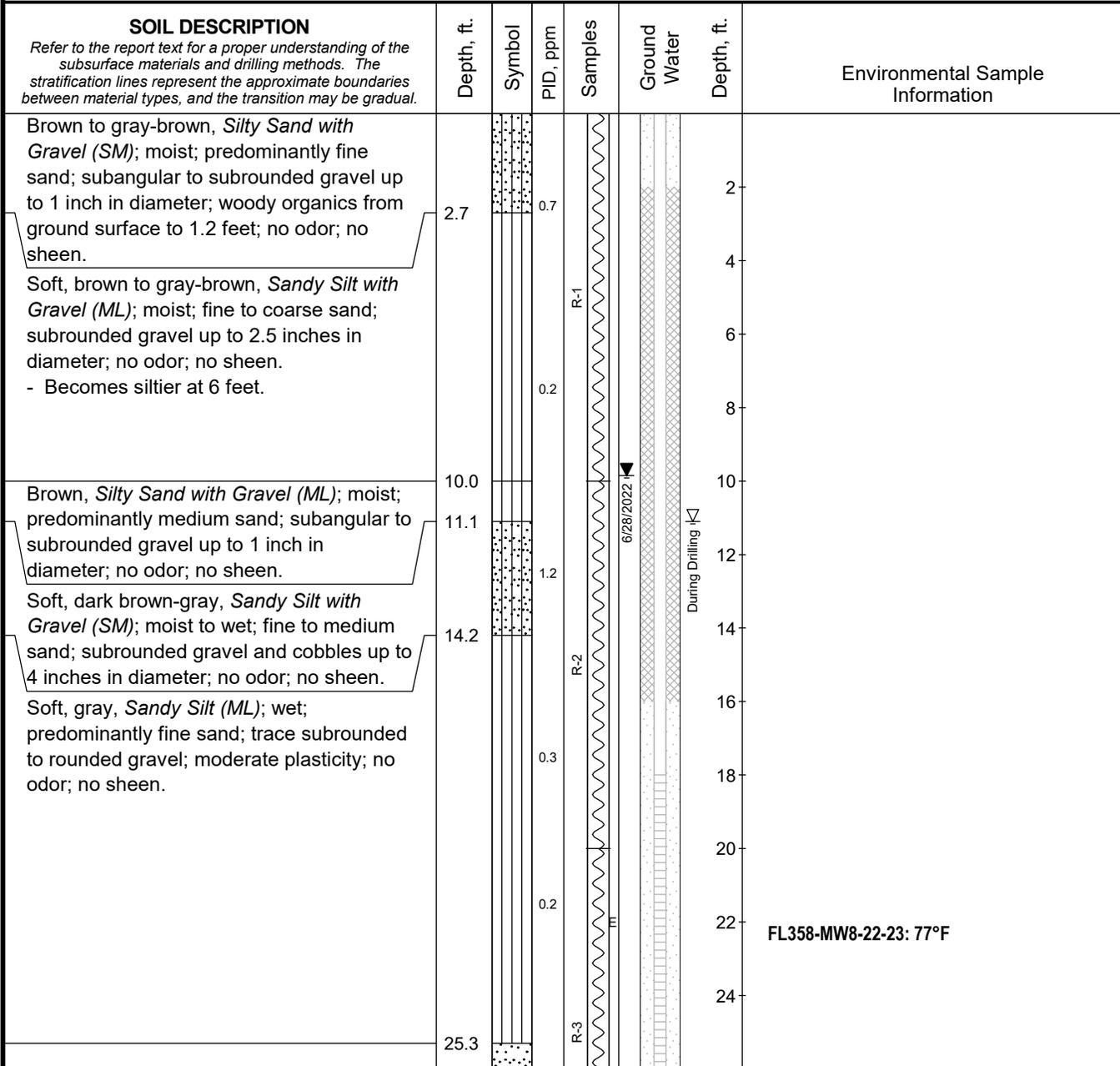
105474-050

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Geotechnical and Environmental Consultants

Sheet 2 of 2

MASTER LOG E-ENV - NOT PLOT 105474-050.GPJ SHAN\_WIL\_G5091 11/23/22 Rev: JXS Typ: LKN

Total Depth: 40 ft. Northing: ~ 119,164 ft. Drilling Method: Sonic Core Hole Diam.: 6 in.  
 Top Elevation: ~ 435.7 ft. Easting: ~ 1,275,774 ft. Drilling Company: Holt Services Rod Diam.: 4-inch  
 Vert. Datum: NAVD88 Station: ~ N/A Drill Rig Equipment: Terra Sonic 150 C.C. Hammer Type: \_\_\_\_\_  
 Horiz. Datum: WA State Plane N Offset: ~ N/A Other Comments: No water/fluid added



CONTINUED NEXT SHEET

**LEGEND**

- \* Sample Not Recovered
- E Environmental Sample Obtained
- [Symbol] Soil Core (as in Sonic Core Borings)
- [Symbol] Well Screen and Sand Filter
- [Symbol] Bentonite-Cement Grout
- [Symbol] Bentonite Chips/Pellets
- [Symbol] Bentonite Grout
- ▽ Ground Water Level ATD
- ▼ Ground Water Level in Well

**NOTES**

- Refer to KEY for explanation of symbols, codes, abbreviations, and definitions.
- Groundwater level, if indicated above, is for the date specified and may vary.
- USCS designation is based on visual-manual classification and selected lab testing.
- Ecology Well Tag: BNL 558.

FL358 Monitoring Wells  
Federal Way, Washington

**LOG OF BORING FL358-MW8**

November 2022

105474-050

**SHANNON & WILSON, INC.**  
Geotechnical and Environmental Consultants

Sheet 1 of 2

MASTER LOG E-ENV - NOT PLOT 105474-050.GPJ SHAN\_WIL\_G5091 4/23/22 Rev: JXS Typ: LKN

Total Depth: 40 ft. Northing: ~ 119,164 ft. Drilling Method: Sonic Core Hole Diam.: 6 in.  
 Top Elevation: ~ 435.7 ft. Easting: ~ 1,275,774 ft. Drilling Company: Holt Services Rod Diam.: 4-inch  
 Vert. Datum: NAVD88 Station: ~ N/A Drill Rig Equipment: Terra Sonic 150 C.C. Hammer Type: \_\_\_\_\_  
 Horiz. Datum WA State Plane N Offset: ~ N/A Other Comments: No water/fluid added

SOIL DESCRIPTION <i>Refer to the report text for a proper understanding of the subsurface materials and drilling methods. The stratification lines represent the approximate boundaries between material types, and the transition may be gradual.</i>	Depth, ft.	Symbol	PID, ppm	Samples	Ground Water	Depth, ft.	Environmental Sample Information
Gray, <i>Poorly Graded Sand (SP)</i> ; wet; trace to few silt; trace gravel; fine to medium sand; fine, rounded gravel; no odor; no sheen.	27.5		0.1	E		28	FL358-MW8-27-28: 71°F
Brown, <i>Sandy Silt with Gravel (ML)</i> ; wet; fine to medium sand; trace coarse sand; subrounded gravel up to 3 inches in diameter; no odor; no sheen.  - Sandier with decreasing gravel content at 32 feet.	32.0		0.1	E		30	
				R-4		32	FL358-MW8-32-33: 68°F
				E		34	
Hard, gray, <i>Sandy Silt with Gravel (ML)</i> ; fine to coarse sand; weathered silt aquitard (less competent).	36.0		0.3	E		36	FL358-MW8-36-37: 83°F
	37.0		0.5	E		38	FL358-MW8-37-38: 92°F
Hard, gray, hot, brittle, <i>Sandy Silt with Gravel (ML)</i> ; dry; no odor; no sheen.	40.0					40	
BOTTOM OF BORING COMPLETED 6/15/2022						42	
						44	
						46	
						48	
						50	

**LEGEND**

- \* Sample Not Recovered
- E Environmental Sample Obtained
- Soil Core (as in Sonic Core Borings)
- Well Screen and Sand Filter
- Bentonite-Cement Grout
- Bentonite Chips/Pellets
- Bentonite Grout
- Ground Water Level ATD
- Ground Water Level in Well

**NOTES**

1. Refer to KEY for explanation of symbols, codes, abbreviations, and definitions.
2. Groundwater level, if indicated above, is for the date specified and may vary.
3. USCS designation is based on visual-manual classification and selected lab testing.
4. Ecology Well Tag: BNL 558.

FL358 Monitoring Wells  
Federal Way, Washington

**LOG OF BORING FL358-MW8**

November 2022

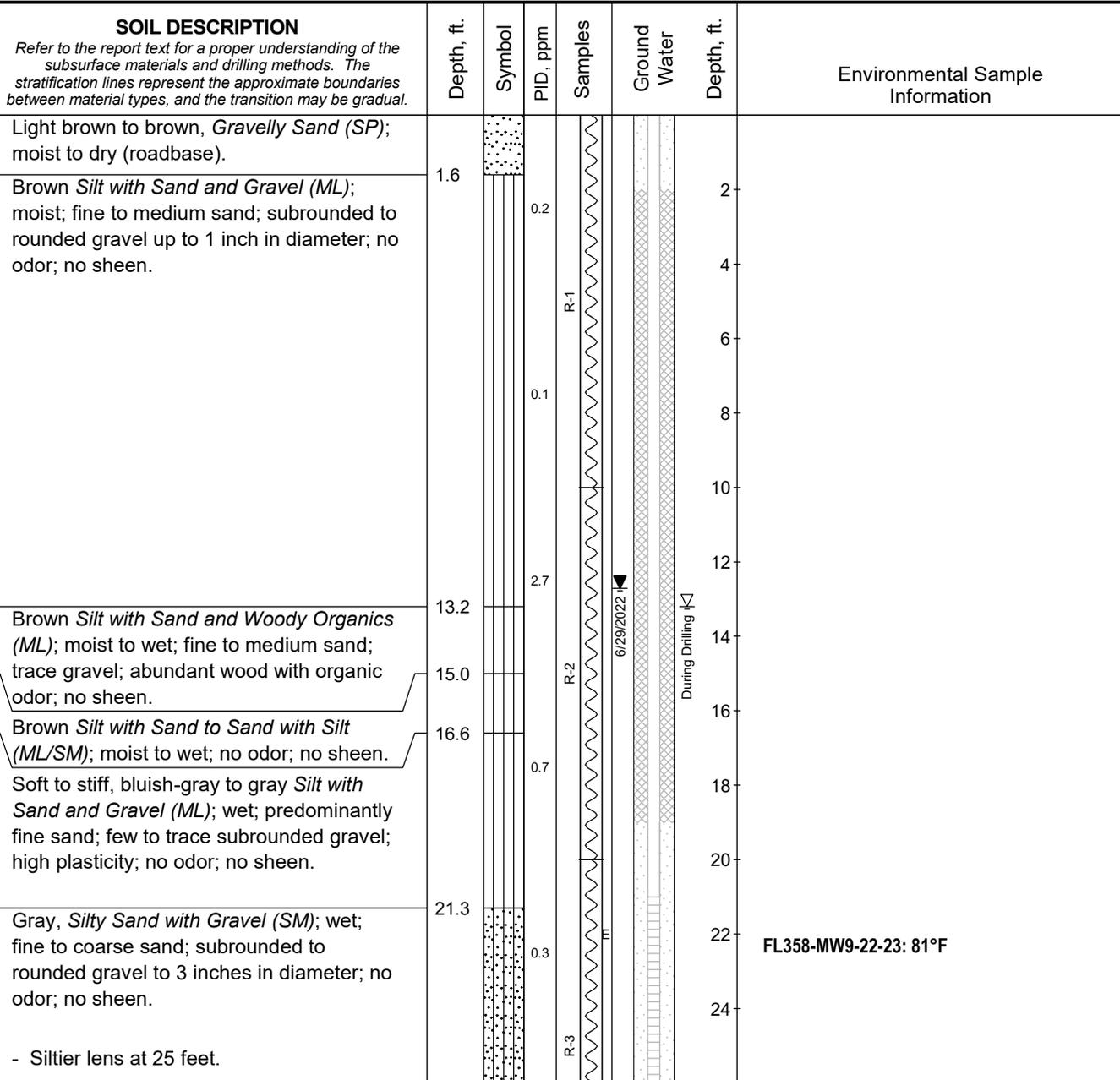
105474-050

**SHANNON & WILSON, INC.**  
Geotechnical and Environmental Consultants

Sheet 2 of 2

MASTER LOG E-ENV - NOT PLOT 105474-050.GPJ SHAN\_WIL\_G5991 11/23/22 Rev: JXS Typ: LKN

Total Depth: 45 ft. Northing: ~ 119,068 ft. Drilling Method: Sonic Core Hole Diam.: 6 in.  
 Top Elevation: ~ 435.4 ft. Easting: ~ 1,275,765 ft. Drilling Company: Holt Services Rod Diam.: 4-inch  
 Vert. Datum: NAVD88 Station: ~ N/A Drill Rig Equipment: Terra Sonic 150 C.C. Hammer Type: \_\_\_\_\_  
 Horiz. Datum WA State Plane N Offset: ~ N/A Other Comments: No water/fluid added



LEGEND

* Sample Not Recovered	[Symbol]	Well Screen and Sand Filter
E Environmental Sample Obtained	[Symbol]	Bentonite-Cement Grout
[Symbol] Soil Core (as in Sonic Core Borings)	[Symbol]	Bentonite Chips/Pellets
	[Symbol]	Bentonite Grout
	▽	Ground Water Level ATD
	▼	Ground Water Level in Well

NOTES

- Refer to KEY for explanation of symbols, codes, abbreviations, and definitions.
- Groundwater level, if indicated above, is for the date specified and may vary.
- USCS designation is based on visual-manual classification and selected lab testing.
- Ecology Well Tag: BNL 558.

FL358 Monitoring Wells  
Federal Way, Washington

**LOG OF BORING FL358-MW9**

November 2022 105474-050

**SHANNON & WILSON, INC.**  
Geotechnical and Environmental Consultants Sheet 1 of 2

MASTER LOG E-ENV - NOT PLOT 105474-050.GPJ SHAN\_WIL\_G5091 11/23/22 Rev: JXS Typ: LKN

Total Depth: 45 ft. Northing: ~ 119,068 ft. Drilling Method: Sonic Core Hole Diam.: 6 in.  
 Top Elevation: ~ 435.4 ft. Easting: ~ 1,275,765 ft. Drilling Company: Holt Services Rod Diam.: 4-inch  
 Vert. Datum: NAVD88 Station: ~ N/A Drill Rig Equipment: Terra Sonic 150 C.C. Hammer Type: \_\_\_\_\_  
 Horiz. Datum: WA State Plane N Offset: ~ N/A Other Comments: No water/fluid added

SOIL DESCRIPTION <i>Refer to the report text for a proper understanding of the subsurface materials and drilling methods. The stratification lines represent the approximate boundaries between material types, and the transition may be gradual.</i>	Depth, ft.	Symbol	PID, ppm	Samples	Ground Water	Depth, ft.	Environmental Sample Information
	29.4		0.1	E		28	FL358-MW9-27-28: 72°F, Duplicate Sample Collected
Soft to medium stiff, gray to bluish-gray, <b>Sandy Silt with Gravel (ML)</b> ; wet; predominantly fine sand; subrounded gravel and cobbles up to 4.5 inches in diameter; low to moderate plasticity; no odor; no sheen.	30.5			E		30	
	32.8		0.4	R-4		32	FL358-MW9-31-32: 76°F
Gray Sand with Silt and Gravel (SP-SM); wet; predominantly medium sand; few fine gravel; no odor; no sheen.						34	
Gray, <b>Sandy Silt with Gravel (ML)</b> ; moist to wet; predominantly fine sand; fine gravel; no odor; no sheen.			0.1	R-5		36	FL358-MW9-37-38: 85°F
	40.0		0.1	E		40	FL358-MW9-40-41: 92°F
Hard, gray, hot, brittle, <b>Sandy Silt with Gravel (ML)</b> ; dry; predominantly fine sand; predominantly fine, subrounded to rounded gravel; diamict; no odor; no sheen.						42	FL358-MW9-41-42: 114°F
	45.0		0.2	R-6		44	
BOTTOM OF BORING COMPLETED 6/16/2022						46	
						48	
						50	

MASTER LOG E-ENV - NOT PLOT 105474-050.GPJ SHAN\_WIL.GB/ggr 4/23/22 Rev. JXS Typ: LKN

**LEGEND**

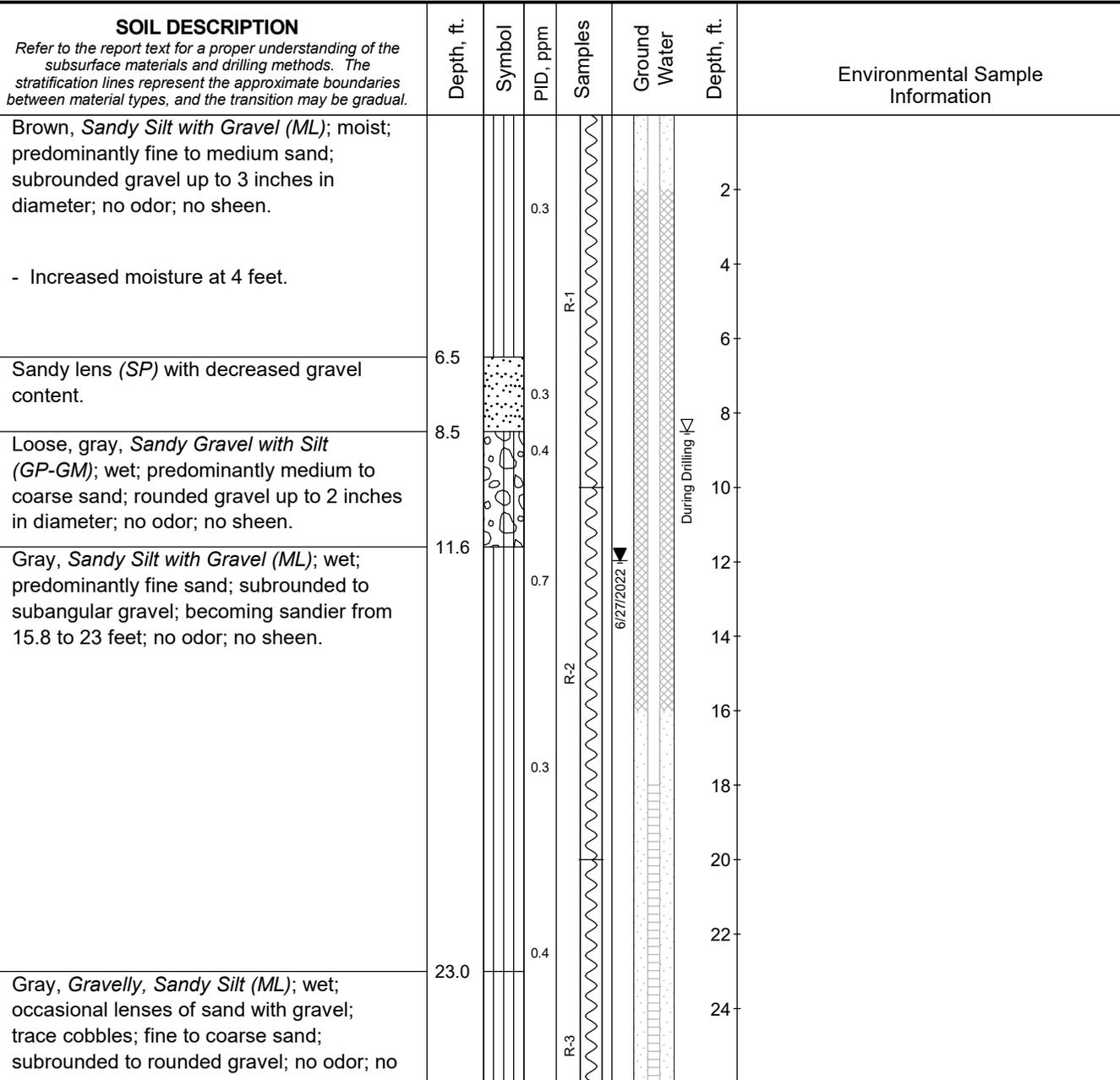
- \* Sample Not Recovered
- E Environmental Sample Obtained
- Soil Core (as in Sonic Core Borings)
- Well Screen and Sand Filter
- Bentonite-Cement Grout
- Bentonite Chips/Pellets
- Bentonite Grout
- Ground Water Level ATD
- Ground Water Level in Well

**NOTES**

1. Refer to KEY for explanation of symbols, codes, abbreviations, and definitions.
2. Groundwater level, if indicated above, is for the date specified and may vary.
3. USCS designation is based on visual-manual classification and selected lab testing.
4. Ecology Well Tag: BNL 558.

FL358 Monitoring Wells Federal Way, Washington	
<b>LOG OF BORING FL358-MW9</b>	
November 2022	105474-050
<b>SHANNON &amp; WILSON, INC.</b> Geotechnical and Environmental Consultants	Sheet 2 of 2

Total Depth: 40 ft. Northing: ~ 118,988 ft. Drilling Method: Sonic Core Hole Diam.: 6 in.  
 Top Elevation: ~ 433.9 ft. Easting: ~ 1,275,731 ft. Drilling Company: Holt Services Rod Diam.: 4-inch  
 Vert. Datum: NAVD88 Station: ~ N/A Drill Rig Equipment: Terra Sonic 150 C.C. Hammer Type: \_\_\_\_\_  
 Horiz. Datum: WA State Plane N Offset: ~ N/A Other Comments: No water/fluid added



CONTINUED NEXT SHEET

**LEGEND**

- \* Sample Not Recovered
- ☐ Soil Core (as in Sonic Core Borings)
- ☐ Well Screen and Sand Filter
- ☐ Bentonite-Cement Grout
- ☐ Bentonite Chips/Pellets
- ☐ Bentonite Grout
- ▽ Ground Water Level ATD
- ▼ Ground Water Level in Well

**NOTES**

- Refer to KEY for explanation of symbols, codes, abbreviations, and definitions.
- Groundwater level, if indicated above, is for the date specified and may vary.
- USCS designation is based on visual-manual classification and selected lab testing.
- Ecology Well Tag: BNL 558.

FL358 Monitoring Wells  
Federal Way, Washington

**LOG OF BORING FL358-MW10**

November 2022

105474-050

**SHANNON & WILSON, INC.**  
Geotechnical and Environmental Consultants

Sheet 1 of 2

MASTER LOG E-ENV - NOT PLOT 105474-050.GPJ SHAN\_WIL.GB 11/18/22 Rev: JXS Typ: LKN

Total Depth: 40 ft. Northing: ~ 118,988 ft. Drilling Method: Sonic Core Hole Diam.: 6 in.  
 Top Elevation: ~ 433.9 ft. Easting: ~ 1,275,731 ft. Drilling Company: Holt Services Rod Diam.: 4-inch  
 Vert. Datum: NAVD88 Station: ~ N/A Drill Rig Equipment: Terra Sonic 150 C.C. Hammer Type: \_\_\_\_\_  
 Horiz. Datum WA State Plane N Offset: ~ N/A Other Comments: No water/fluid added

SOIL DESCRIPTION <i>Refer to the report text for a proper understanding of the subsurface materials and drilling methods. The stratification lines represent the approximate boundaries between material types, and the transition may be gradual.</i>	Depth, ft.	Symbol	PID, ppm	Samples	Ground Water	Depth, ft.	Environmental Sample Information
sheen.			0.2	R-4		28	
- Cobble zone, cobbles up to 5 inches in diameter at 33 feet.			0.8	R-4		30	
Gray Silt with Gravel (ML); moist; trace fine sand; some rounded gravel; no odor; no sheen.	35.0			R-5		32	
Hard, gray, hot, brittle Silt with Sand and Gravel (ML); dry; diamict; no odor; no sheen.	38.0		0.1			34	
<p style="text-align: center;">BOTTOM OF BORING COMPLETED 6/13/2022</p> <p>No soil samples collected from the well boring.</p>	40.0					36	
						38	
						40	
						42	
						44	
						46	
						48	
						50	

**LEGEND**

- \* Sample Not Recovered
- ☐ Soil Core (as in Sonic Core Borings)
- ☐ Well Screen and Sand Filter
- ☐ Bentonite-Cement Grout
- ☐ Bentonite Chips/Pellets
- ☐ Bentonite Grout
- ▽ Ground Water Level ATD
- ▼ Ground Water Level in Well

**NOTES**

- Refer to KEY for explanation of symbols, codes, abbreviations, and definitions.
- Groundwater level, if indicated above, is for the date specified and may vary.
- USCS designation is based on visual-manual classification and selected lab testing.
- Ecology Well Tag: BNL 558.

FL358 Monitoring Wells  
Federal Way, Washington

**LOG OF BORING FL358-MW10**

November 2022

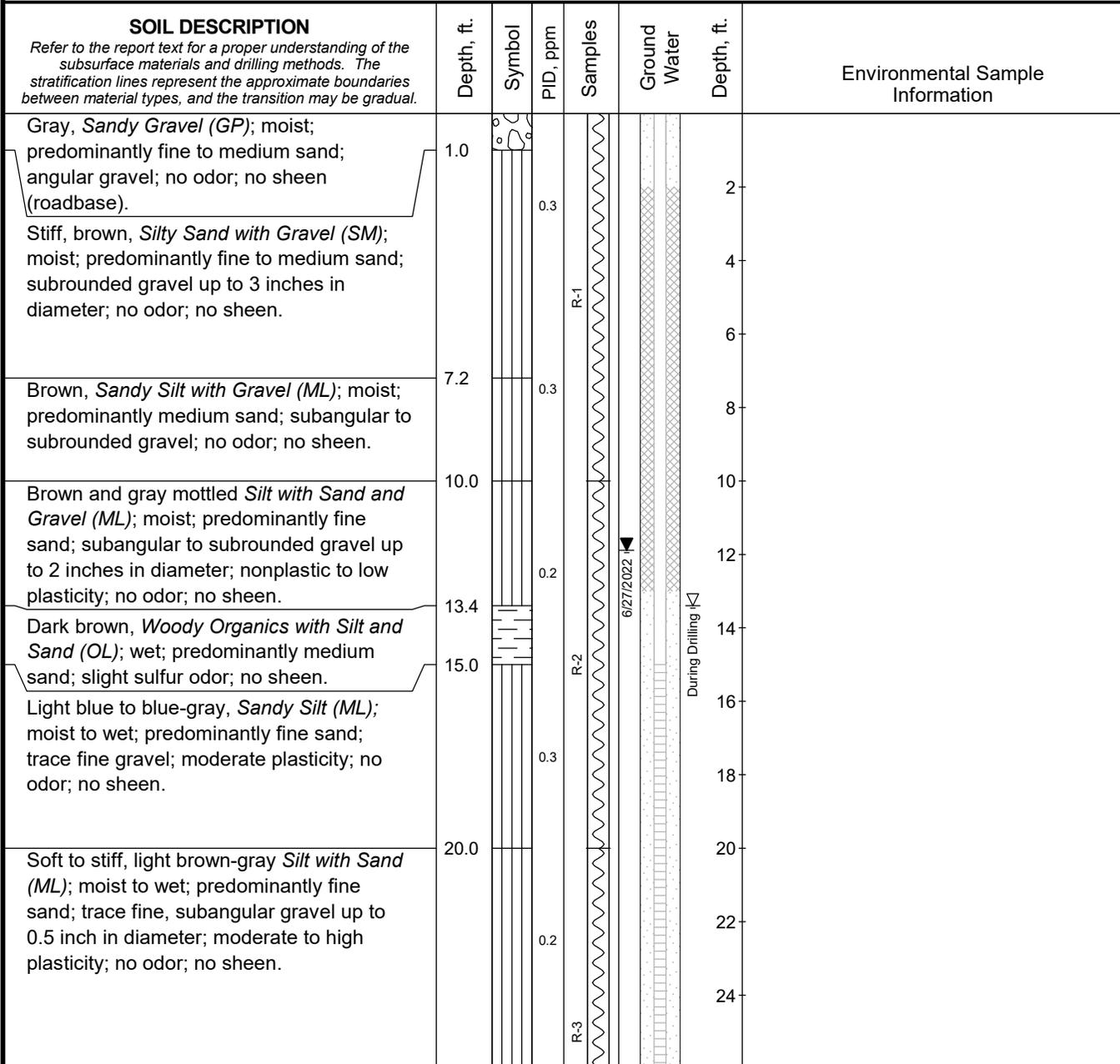
105474-050

**SHANNON & WILSON, INC.**  
Geotechnical and Environmental Consultants

Sheet 2 of 2

MASTER LOG E-ENV - NOT PLOT 105474-050.GPJ SHAN\_WIL.GPJ 11/23/22 Rev: JXS Typ: LKN

Total Depth: 35 ft. Northing: ~ 119,013 ft. Drilling Method: Sonic Core Hole Diam.: 6 in.  
 Top Elevation: ~ 433 ft. Easting: ~ 1,275,627 ft. Drilling Company: Holt Services Rod Diam.: 4-inch  
 Vert. Datum: NAVD88 Station: ~ N/A Drill Rig Equipment: Terra Sonic 150 C.C. Hammer Type: \_\_\_\_\_  
 Horiz. Datum: WA State Plane N Offset: ~ N/A Other Comments: No water/fluid added



CONTINUED NEXT SHEET

**LEGEND**

- \* Sample Not Recovered
- Soil Core (as in Sonic Core Borings)
- Well Screen and Sand Filter
- Bentonite-Cement Grout
- Bentonite Chips/Pellets
- Bentonite Grout
- Ground Water Level ATD
- Ground Water Level in Well

**NOTES**

1. Refer to KEY for explanation of symbols, codes, abbreviations, and definitions.
2. Groundwater level, if indicated above, is for the date specified and may vary.
3. USCS designation is based on visual-manual classification and selected lab testing.
4. Ecology Well Tag: BNL 558.

FL358 Monitoring Wells  
Federal Way, Washington

**LOG OF BORING FL358-MW11**

November 2022

105474-050

**SHANNON & WILSON, INC.**  
Geotechnical and Environmental Consultants

Sheet 1 of 2

MASTER LOG E-ENV - NOT PLOT 105474-050.GPJ SHAN\_WIL.GB 11/22 Rev. JKS Typ: LKN

Total Depth: 35 ft. Northing: ~ 119,013 ft. Drilling Method: Sonic Core Hole Diam.: 6 in.  
 Top Elevation: ~ 433 ft. Easting: ~ 1,275,627 ft. Drilling Company: Holt Services Rod Diam.: 4-inch  
 Vert. Datum: NAVD88 Station: ~ N/A Drill Rig Equipment: Terra Sonic 150 C.C. Hammer Type: \_\_\_\_\_  
 Horiz. Datum WA State Plane N Offset: ~ N/A Other Comments: No water/fluid added

<b>SOIL DESCRIPTION</b> <i>Refer to the report text for a proper understanding of the subsurface materials and drilling methods. The stratification lines represent the approximate boundaries between material types, and the transition may be gradual.</i>	Depth, ft.	Symbol	PID, ppm	Samples	Ground Water	Depth, ft.	Environmental Sample Information
			0.1			28	
Hard, hot, brittle <i>Silt with Sand and Gravel (ML)</i> ; dry; fine gravel; fine sand; diamict; no odor; no sheen.	34.0		0.4	R-4		32	
BOTTOM OF BORING COMPLETED 6/14/2022	35.0					34	
No soil samples collected from the well boring.						36 38 40 42 44 46 48 50	

**LEGEND**

- \* Sample Not Recovered
- ☐ Soil Core (as in Sonic Core Borings)
- ☐ Well Screen and Sand Filter
- ☐ Bentonite-Cement Grout
- ☐ Bentonite Chips/Pellets
- ☐ Bentonite Grout
- ▽ Ground Water Level ATD
- ▼ Ground Water Level in Well

**NOTES**

1. Refer to KEY for explanation of symbols, codes, abbreviations, and definitions.
2. Groundwater level, if indicated above, is for the date specified and may vary.
3. USCS designation is based on visual-manual classification and selected lab testing.
4. Ecology Well Tag: BNL 558.

FL358 Monitoring Wells  
Federal Way, Washington

**LOG OF BORING FL358-MW11**

November 2022

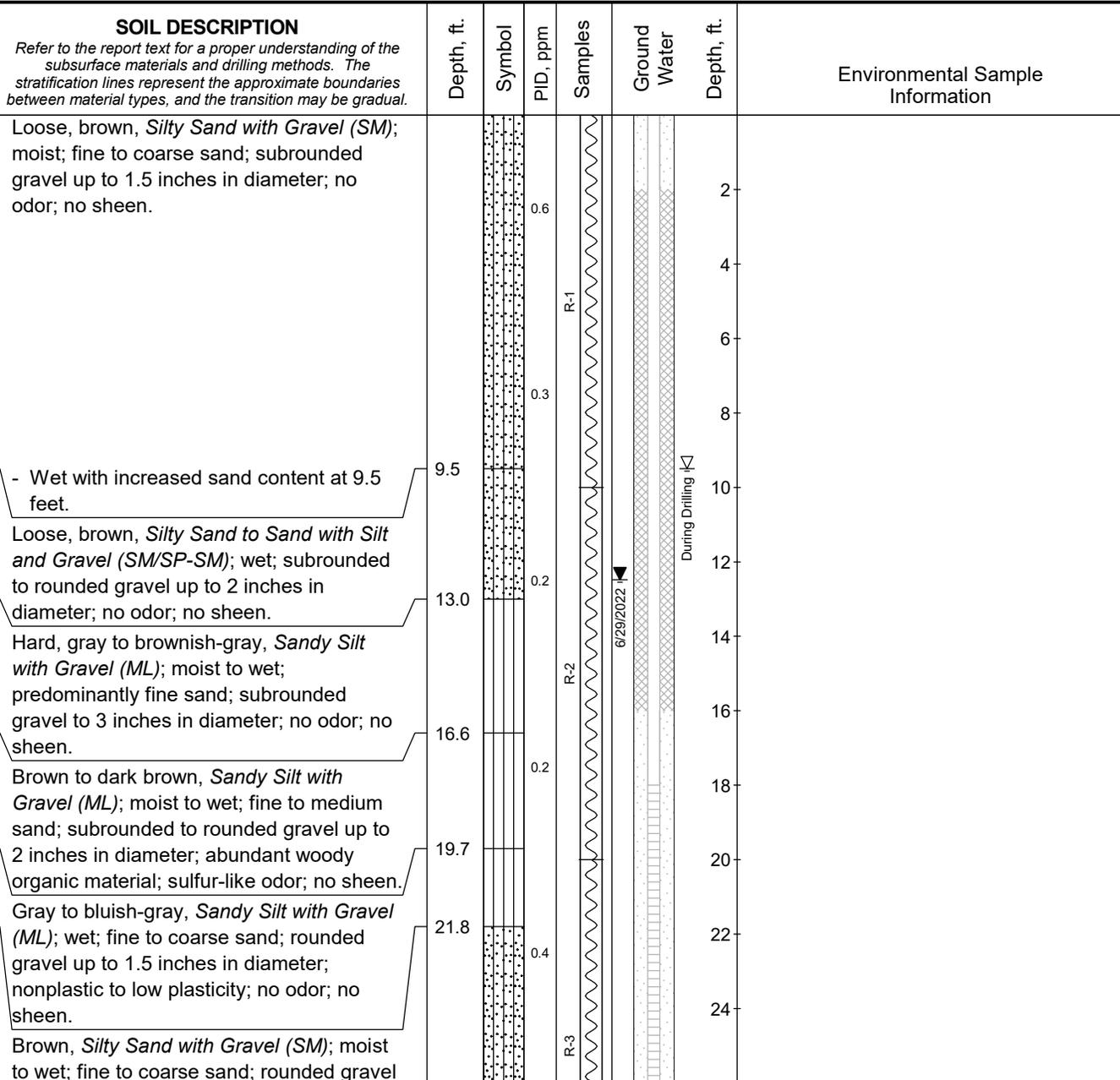
105474-050

**SHANNON & WILSON, INC.**  
Geotechnical and Environmental Consultants

Sheet 2 of 2

MASTER LOG E-ENV - NOT PLOT 105474-050.GPJ SHAN\_WIL.GPJ 11/23/22 Rev: JKS Typ: LKN

Total Depth: 40 ft. Northing: ~ 119,127 ft. Drilling Method: Sonic Core Hole Diam.: 6 in.  
 Top Elevation: ~ 435.2 ft. Easting: ~ 1,275,654 ft. Drilling Company: Holt Services Rod Diam.: 4-inch  
 Vert. Datum: NAVD88 Station: ~ N/A Drill Rig Equipment: Terra Sonic 150 C.C. Hammer Type: \_\_\_\_\_  
 Horiz. Datum WA State Plane N Offset: ~ N/A Other Comments: No water/fluid added



**LEGEND**

* Sample Not Recovered	[Symbol]	Well Screen and Sand Filter
[Symbol] Soil Core (as in Sonic Core Borings)	[Symbol]	Bentonite-Cement Grout
	[Symbol]	Bentonite Chips/Pellets
	[Symbol]	Bentonite Grout
	▽	Ground Water Level ATD
	▼	Ground Water Level in Well

- NOTES**
1. Refer to KEY for explanation of symbols, codes, abbreviations, and definitions.
  2. Groundwater level, if indicated above, is for the date specified and may vary.
  3. USCS designation is based on visual-manual classification and selected lab testing.
  4. Ecology Well Tag: BNL 558.

FL358 Monitoring Wells  
Federal Way, Washington

**LOG OF BORING FL358-MW12**

November 2022 105474-050

**SHANNON & WILSON, INC.**  
Geotechnical and Environmental Consultants Sheet 1 of 2

MASTER LOG E-ENV - NOT PLOT 105474-050.GPJ SHAN WIL.GB 11/18/22 Rev. JXS Typ: LKN

Total Depth: 40 ft. Northing: ~ 119,127 ft. Drilling Method: Sonic Core Hole Diam.: 6 in.  
 Top Elevation: ~ 435.2 ft. Easting: ~ 1,275,654 ft. Drilling Company: Holt Services Rod Diam.: 4-inch  
 Vert. Datum: NAVD88 Station: ~ N/A Drill Rig Equipment: Terra Sonic 150 C.C. Hammer Type: \_\_\_\_\_  
 Horiz. Datum WA State Plane N Offset: ~ N/A Other Comments: No water/fluid added

SOIL DESCRIPTION <i>Refer to the report text for a proper understanding of the subsurface materials and drilling methods. The stratification lines represent the approximate boundaries between material types, and the transition may be gradual.</i>	Depth, ft.	Symbol	PID, ppm	Samples	Ground Water	Depth, ft.	Environmental Sample Information
up to 3 inches in diameter; no odor; no sheen.  Brown Silt with Sand and Gravel (ML); moist; predominantly fine sand; trace to few rounded gravel; no odor; no sheen.  - Color changes to gray with decreasing gravel content at 35 feet.	26.0		0.5	R-4		28	
Hard, gray, hot, brittle Silt with Sand and Gravel (ML); dry; fine sand; rounded gravel up to 1 inch in diameter; diamict; no odor; no sheen.	37.0		0	R-5		38	
BOTTOM OF BORING COMPLETED 6/20/2022  No soil samples collected from the well boring.	40.0					40	

**LEGEND**

- \* Sample Not Recovered
-  Soil Core (as in Sonic Core Borings)
-  Well Screen and Sand Filter
-  Bentonite-Cement Grout
-  Bentonite Chips/Pellets
-  Bentonite Grout
-  Ground Water Level ATD
-  Ground Water Level in Well

**NOTES**

1. Refer to KEY for explanation of symbols, codes, abbreviations, and definitions.
2. Groundwater level, if indicated above, is for the date specified and may vary.
3. USCS designation is based on visual-manual classification and selected lab testing.
4. Ecology Well Tag: BNL 558.

FL358 Monitoring Wells  
Federal Way, Washington

**LOG OF BORING FL358-MW12**

November 2022

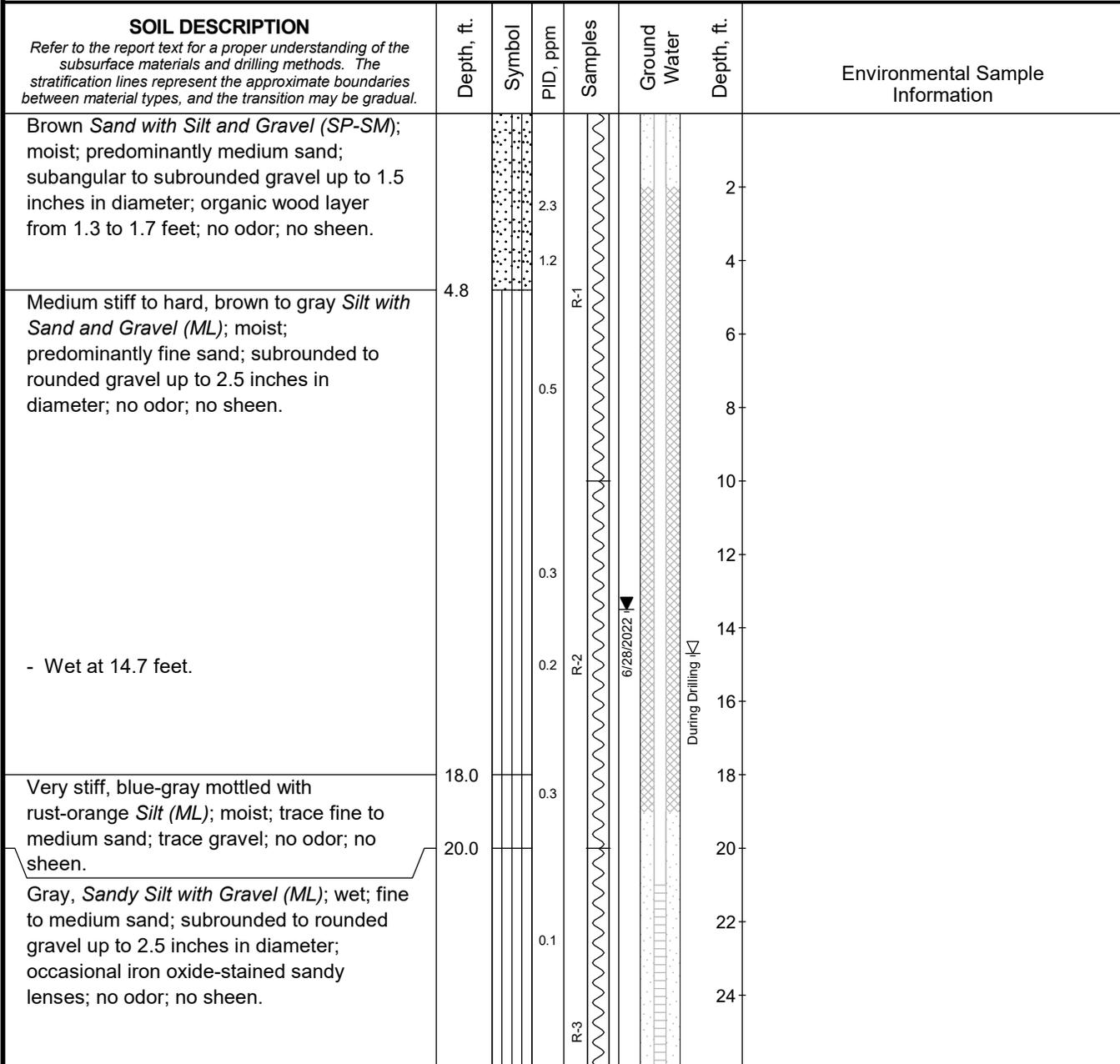
105474-050

**SHANNON & WILSON, INC.**  
Geotechnical and Environmental Consultants

Sheet 2 of 2

MASTER LOG E-ENV - NOT PLOT 105474-050.GPJ SHAN\_WIL.GB 09/14/22 Rev. JXS Typ: LKN

Total Depth: 42.5 ft. Northing: ~ 119,170 ft. Drilling Method: Sonic Core Hole Diam.: 6 in.  
 Top Elevation: ~ 435.5 ft. Easting: ~ 1,275,691 ft. Drilling Company: Holt Services Rod Diam.: 4-inch  
 Vert. Datum: NAVD88 Station: ~ N/A Drill Rig Equipment: Terra Sonic 150 C.C. Hammer Type: \_\_\_\_\_  
 Horiz. Datum: WA State Plane N Offset: ~ N/A Other Comments: No water/fluid added



CONTINUED NEXT SHEET

**LEGEND**

- \* Sample Not Recovered
- [Symbol] Soil Core (as in Sonic Core Borings)
- [Symbol] Well Screen and Sand Filter
- [Symbol] Bentonite-Cement Grout
- [Symbol] Bentonite Chips/Pellets
- [Symbol] Bentonite Grout
- [Symbol] Ground Water Level ATD
- [Symbol] Ground Water Level in Well

**NOTES**

1. Refer to KEY for explanation of symbols, codes, abbreviations, and definitions.
2. Groundwater level, if indicated above, is for the date specified and may vary.
3. USCS designation is based on visual-manual classification and selected lab testing.
4. Ecology Well Tag: BNL 558.

FL358 Monitoring Wells  
Federal Way, Washington

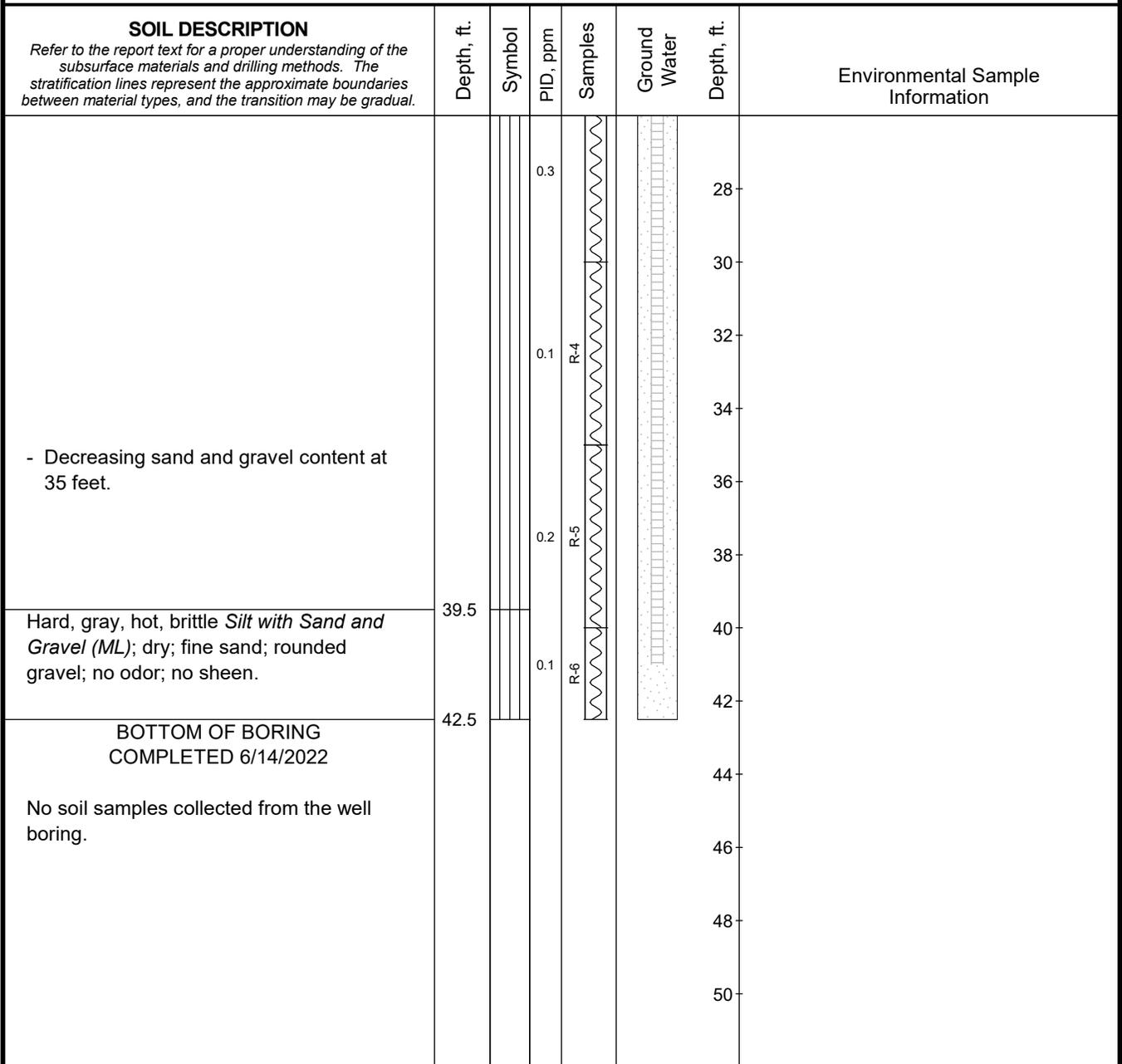
**LOG OF BORING FL358-MW13**

November 2022 105474-050

**SHANNON & WILSON, INC.**  
Geotechnical and Environmental Consultants Sheet 1 of 2

MASTER LOG E-ENV - NOT PLOT 105474-050.GPJ SHAN\_WIL\_G5091 11/23/22 Rev: JXS Typ: LKN

Total Depth: 42.5 ft. Northing: ~ 119,170 ft. Drilling Method: Sonic Core Hole Diam.: 6 in.  
 Top Elevation: ~ 435.5 ft. Easting: ~ 1,275,691 ft. Drilling Company: Holt Services Rod Diam.: 4-inch  
 Vert. Datum: NAVD88 Station: ~ N/A Drill Rig Equipment: Terra Sonic 150 C.C. Hammer Type: \_\_\_\_\_  
 Horiz. Datum WA State Plane N Offset: ~ N/A Other Comments: No water/fluid added



MASTER LOG E-ENV - NOT PLOT 105474-050.GPJ SHAN\_WIL\_6/9/22 Rev: JXS Typ: LKN

**LEGEND**

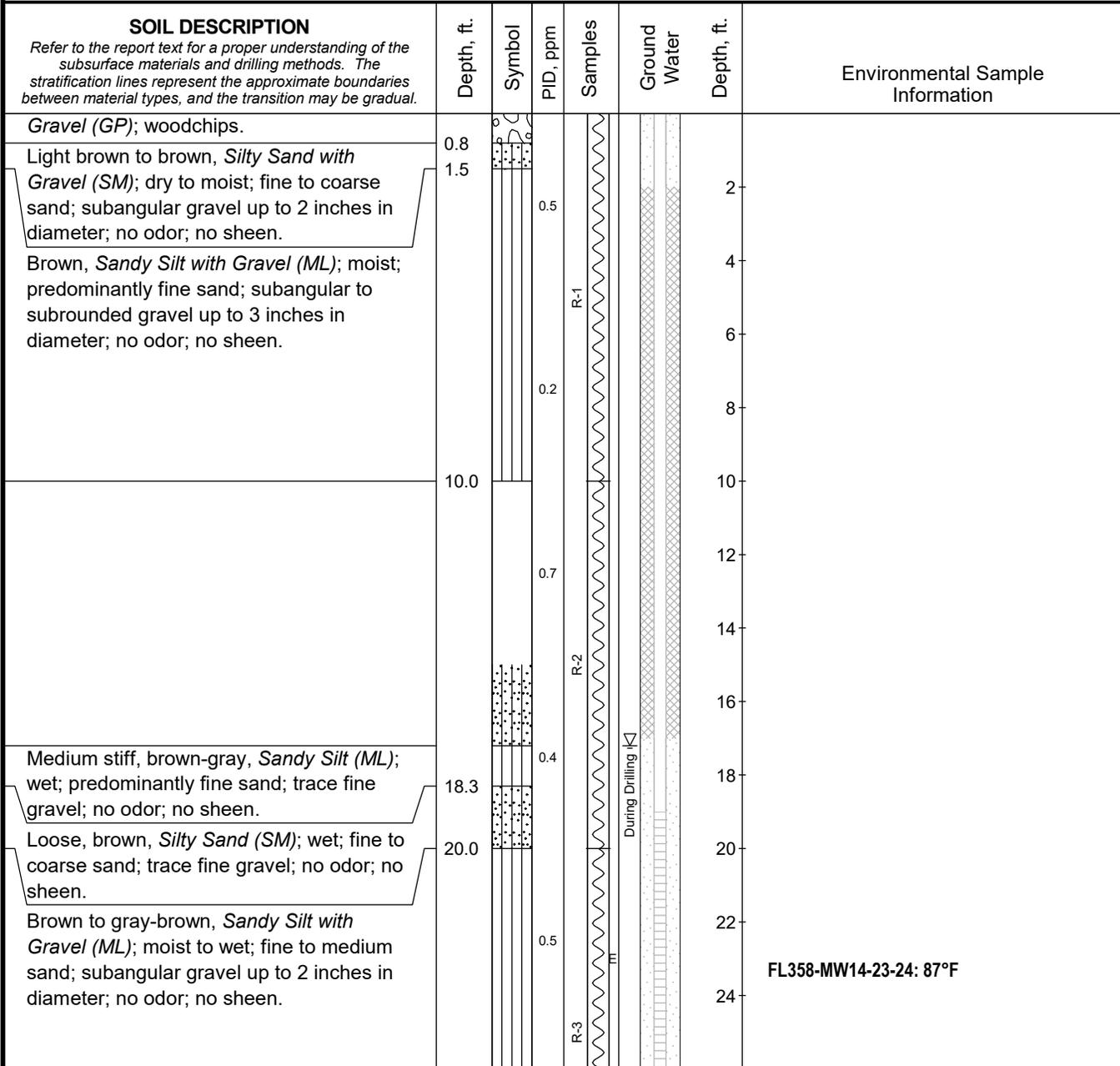
- \* Sample Not Recovered
- ☐ Soil Core (as in Sonic Core Borings)
- ☐ Well Screen and Sand Filter
- ☐ Bentonite-Cement Grout
- ☐ Bentonite Chips/Pellets
- ☐ Bentonite Grout
- ▽ Ground Water Level ATD
- ▼ Ground Water Level in Well

**NOTES**

1. Refer to KEY for explanation of symbols, codes, abbreviations, and definitions.
2. Groundwater level, if indicated above, is for the date specified and may vary.
3. USCS designation is based on visual-manual classification and selected lab testing.
4. Ecology Well Tag: BNL 558.

FL358 Monitoring Wells Federal Way, Washington	
<b>LOG OF BORING FL358-MW13</b>	
November 2022	105474-050
<b>SHANNON &amp; WILSON, INC.</b> Geotechnical and Environmental Consultants	Sheet 2 of 2

Total Depth: 40 ft. Northing: ~ 119,054 ft. Drilling Method: Sonic Core Hole Diam.: 6 in.  
 Top Elevation: ~ 434.4 ft. Easting: ~ 1,275,704 ft. Drilling Company: Holt Services Rod Diam.: 4-inch  
 Vert. Datum: NAVD88 Station: ~ N/A Drill Rig Equipment: Terra Sonic 150 C.C. Hammer Type: \_\_\_\_\_  
 Horiz. Datum WA State Plane N Offset: ~ N/A Other Comments: No water/fluid added



CONTINUED NEXT SHEET

LEGEND

- \* Sample Not Recovered
- E Environmental Sample Obtained
- Soil Core (as in Sonic Core Borings)
- Well Screen and Sand Filter
- Bentonite-Cement Grout
- Bentonite Chips/Pellets
- Bentonite Grout
- Ground Water Level ATD

NOTES

- Refer to KEY for explanation of symbols, codes, abbreviations, and definitions.
- Groundwater level, if indicated above, is for the date specified and may vary.
- USCS designation is based on visual-manual classification and selected lab testing.
- Ecology Well Tag: BNL 558.

FL358 Monitoring Wells  
Federal Way, Washington

LOG OF BORING FL358-MW14

November 2022

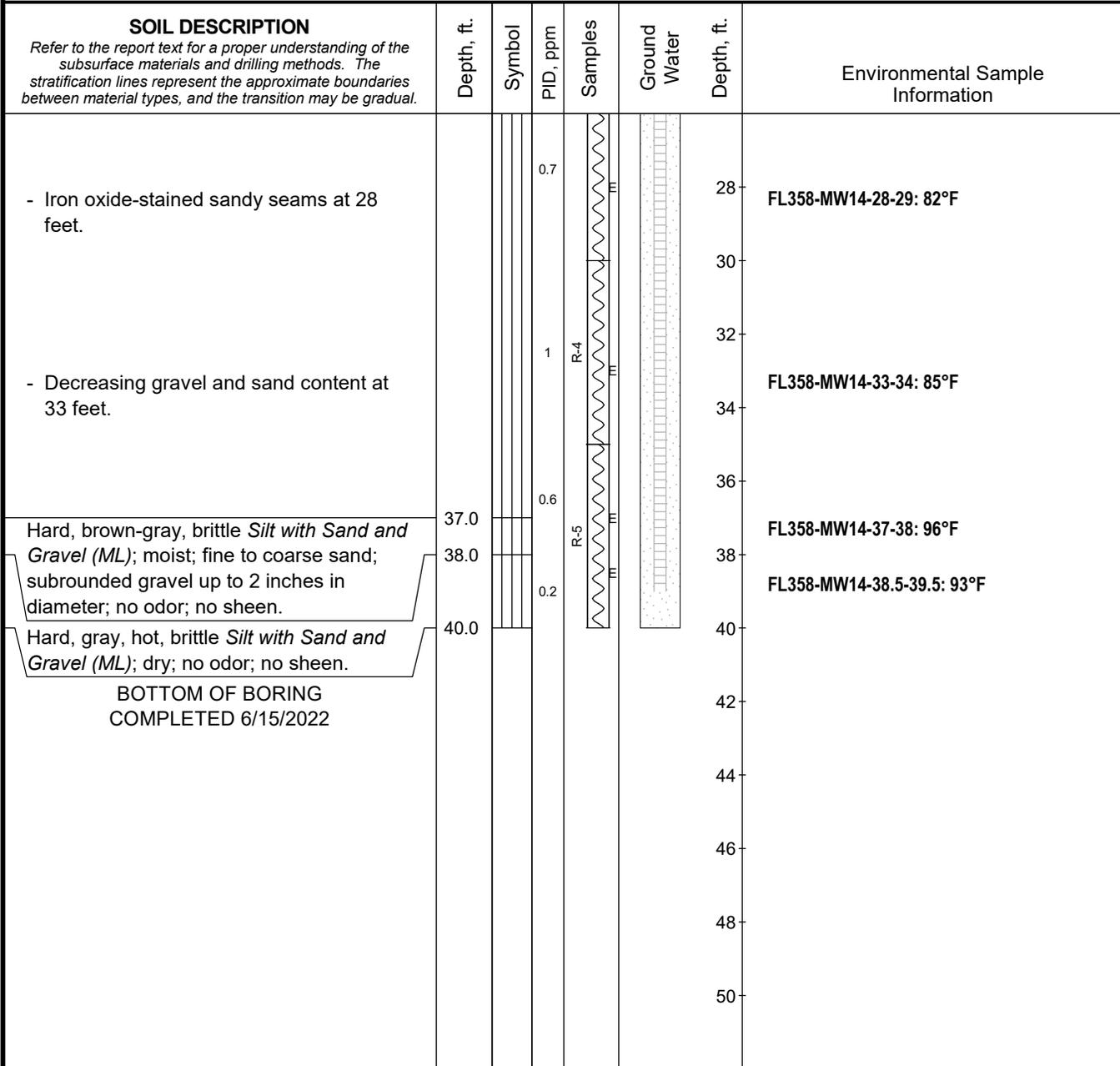
105474-050

SHANNON & WILSON, INC.  
Geotechnical and Environmental Consultants

Sheet 1 of 2

MASTER LOG E-ENV - NOT PLOT 105474-050.GPJ SHAN\_WIL\_05/01/22 Rev: JXS Typ: LKN

Total Depth: 40 ft. Northing: ~ 119,054 ft. Drilling Method: Sonic Core Hole Diam.: 6 in.  
 Top Elevation: ~ 434.4 ft. Easting: ~ 1,275,704 ft. Drilling Company: Holt Services Rod Diam.: 4-inch  
 Vert. Datum: NAVD88 Station: ~ N/A Drill Rig Equipment: Terra Sonic 150 C.C. Hammer Type: \_\_\_\_\_  
 Horiz. Datum: WA State Plane N Offset: ~ N/A Other Comments: No water/fluid added



**LEGEND**

- \* Sample Not Recovered
- E Environmental Sample Obtained
- Soil Core (as in Sonic Core Borings)
- Well Screen and Sand Filter
- Bentonite-Cement Grout
- Bentonite Chips/Pellets
- Bentonite Grout
- Ground Water Level ATD

**NOTES**

- Refer to KEY for explanation of symbols, codes, abbreviations, and definitions.
- Groundwater level, if indicated above, is for the date specified and may vary.
- USCS designation is based on visual-manual classification and selected lab testing.
- Ecology Well Tag: BNL 558.

FL358 Monitoring Wells  
Federal Way, Washington

**LOG OF BORING FL358-MW14**

November 2022

105474-050

**SHANNON & WILSON, INC.**  
Geotechnical and Environmental Consultants

Sheet 2 of 2

MASTER LOG E-ENV - NOT PLOT 105474-050.GPJ SHAN\_WIL.GB 11/18/22 Rev: JXS Typ: LKN

Appendix B

# Well Development Forms

APPENDIX B: WELL DEVELOPMENT FORMS

OWNER / LOCATION: Sound Transit DATE: 6/24/22  
 WELL NO: FL358-MUSA WEATHER: Sun PERSONNEL: JTS  
 ECOLOGY TAG NO: BL509 MEASURING POINT (MP): TOC  
 LOCK NO. OR COMBINATION: ✓ CASING DIA: 2 in. CASING: 0.163 gal/ft. TIME / PID HEADSPACE: 0 ppm  
 CASING STICKDOWN < OPEN MON. RIM: — ft. MON. HEIGHT: ✓ ft. MONUMENT TYPE & DIA: Flush 8" in.  
 SURGE BLOCK TYPE: Waterline PRODUCT THICKNESS: — ft. PRODUCT MEASUREMENT METHOD: DIP  
 TIME / STATIC WL < MP: 10.08 ft. DEVELOPMENT METHOD: (Bailer-SS, Teflon, HDPE) (Hand Waterra) (Powered Waterra) (Other —)  
 TIME / VWP READING: — (Digits, Temp.) VWP READOUT BOX ID: — DECON. METHOD: Sigurox / DI  
 WELL DEPTH < MP: 25.98 ft. (Hard or Soft?) WATER COLUMN HEIGHT: 15.7 ft. VOLUME IN WELL: 2.56 gal.  
 WATER VOLUME ADDED? ✓ (Tap or Distilled?) VOLUME PURGED: 20 gal. REPAIRS NEEDED? ✓  
 MEANS OF SEDIMENT MEASUREMENT IN PURGE WATER: Visual / ruler SCREEN LENGTH: 5 ft.

FIELD PARAMETERS

START TIME/ WATER VOLUME ADDED, if any (gal)	END TIME	INTERVAL SURGED/ PURGED (ft > TD*)	TOTAL VOLUME PURGED (gal) -	SEDIMENT THICKNESS (in or ml)	COLOR/ ODOR/ SHEEN?	FIELD PARAMETERS, if any (including units)
1413	1420	5.5-5	4	Trace	Initial	tub = 5 ft
1428	1441	4.5-4	4	}	Purge	calls
1443	1452	2.5-3	4			
1454	1502	2.5-2	4			
1503	1510	1.5-1	4			
1328	1331	2.5-2	1	tube 2.69	NTV @ 1333	6127

\*TD = Total Depth of Well

PURGE WATER DISPOSITION: Down DRUM NUMBERS / LOCATION: 1  
 RELATIVE RECOVERY RATE: See notes (Rapid - Moderate - Slow) FINAL WELL DEPTH < MP: 25.78 ft. SHEEN / ODOR? N  
 COMMENTS: n. 1" sed at bottom bucket. Gw @ 11.64 Gw @ 11.18 (5 min elapsed)  
 CASING CAP LEFT LOOSE OR TIGHT? (O) WAS ALL SEDIMENT REMOVED? ✓

6/24  
 Login: sac  
 Date: 02-10-2011  
 6127  
 Filename: J:\Support\Library\FIELD AND LAB FORMS\AutoCAD\ Well Development Log.dwg

OWNER / LOCATION: ST / FWTC DATE: 6/24/22  
 WELL NO: FL355-MWSB WEATHER: Sun PERSONNEL: JXS  
 ECOLOGY TAG NO: BNL 568 MEASURING POINT (MP): TOL  
 LOCK NO. OR COMBINATION: — CASING DIA: 2 in. CASING: 0.163 gal / ft. TIME / PID HEADSPACE: — ppm  
 CASING STICKDOWN < OPEN MON. RIM: — ft. MON. HEIGHT: — ft. MONUMENT TYPE & DIA: Flush 8 in.  
 SURGE BLOCK TYPE: Wateria PRODUCT THICKNESS: — ft. PRODUCT MEASUREMENT METHOD: —  
 TIME / STATIC WL < MP: 9.36 ft. DEVELOPMENT METHOD: (Bailer-SS, Teflon, HDPE) (Hand Wateria) (Powered Wateria) (Other —)  
 TIME / VWP READING: — (Digits, Temp.) VWP READOUT BOX ID: — DECON. METHOD: Siquinox  
 WELL DEPTH < MP: 37.8 ft. (Hard or Soft?) WATER COLUMN HEIGHT: 28.44 ft. VOLUME IN WELL: 4.64 gal.  
 WATER VOLUME ADDED? No (Tap or Distilled?) VOLUME PURGED: 25 gal. REPAIRS NEEDED? No  
 MEANS OF SEDIMENT MEASUREMENT IN PURGE WATER: Visual 30 SCREEN LENGTH: 5' ft.

FIELD PARAMETERS

START TIME/ WATER VOLUME ADDED, if any (gal)	END TIME	INTERVAL SURGED/ PURGED (ft > TD*)	TOTAL VOLUME PURGED (gal)	SEDIMENT THICKNESS (in or ml)	COLOR/ ODOR/ SHEEN?	FIELD PARAMETERS, if any (including units)
1215	1226	5.5-5	5 gal	Traces	Brown	Initial Turb. = Ev. 4, bid attention
1230	1242	4.5-4	6 gal	↓	↓	↓ turbid
1246	1256	3.5-3	6 gal	↓	↓	
1258	1310	2.5-2	6 gal	↓	↓	* Generator vents out of gas
1313	1323	1.5-1	6 gal	↓	↓	Final NTU surge/urge = 4,890 let equilibrate check turbid water
1301	1304	2.5-2	1	turb = 7.16 NTU	@ 1305 6/22	

\*TD = Total Depth of Well

PURGE WATER DISPOSITION: Downs DRUM NUMBERS / LOCATION: 1  
 RELATIVE RECOVERY RATE: — (Rapid - Moderate - Slow) FINAL WELL DEPTH < MP: 37.8 ft. SHEEN / ODOR? —  
 COMMENTS: ~ 0.75" sed accum. bottom of bucket. GW @ 30.10 GW @ 20.32 after 5 min elytd  
 CASING CAP LEFT LOOSE OR TIGHT? (TIGHT) WAS ALL SEDIMENT REMOVED? —

6/24  
 Login: sac  
 Date: 02-10-2011  
 6/22  
 Filename: J:\Support\Library\FIELD AND LAB FORMS\AutoCAD\_Well Development Log.dwg

OWNER / LOCATION: Sound Transit / FwTC DATE: 6/24/22  
 WELL NO: FL357-MWB WEATHER: Sun ☀ PERSONNEL: JXS  
 ECOLOGY TAG NO: BNL 566 MEASURING POINT (MP): 700  
 LOCK NO. OR COMBINATION: — CASING DIA: 2 in. CASING: 0.163 gal / ft. TIME / PID HEADSPACE: 0 ppm  
 CASING STICKDOWN < OPEN MON. RIM: — ft. MON. HEIGHT: — ft. MONUMENT TYPE & DIA: 8" flush in.  
 SURGE BLOCK TYPE: Waterira PRODUCT THICKNESS: NA ft. PRODUCT MEASUREMENT METHOD: NA  
 TIME / STATIC WL < MP: 11.58 ft. DEVELOPMENT METHOD: (Bailer-SS, Teflon, HDPE) (Hand Waterira) (Powered Waterira) (Other \_\_\_\_\_)  
 TIME / VWP READING: \_\_\_\_\_ (Digits, Temp.) VWP READOUT BOX ID: \_\_\_\_\_ DECON. METHOD: Sigmax / DT  
 WELL DEPTH < MP: 37.6 ft. (Hard or Soft?) WATER COLUMN HEIGHT: 26.0' ft. VOLUME IN WELL: 4.24 gal.  
 WATER VOLUME ADDED? None (Tap or Distilled?) VOLUME PURGED: 25 gal. REPAIRS NEEDED? None  
 MEANS OF SEDIMENT MEASUREMENT IN PURGE WATER: Visual / measuring by L-Final SCREEN LENGTH: 30 ft.

FIELD PARAMETERS

START TIME/ WATER VOLUME ADDED, if any (gal)	END TIME	INTERVAL SURGED/ PURGED (ft > TD*)	TOTAL VOLUME PURGED (gal)	SEDIMENT THICKNESS (in or ml)	COLOR/ ODOR/ SHEEN?	FIELD PARAMETERS, if any (including units)	
0850	0856	20.5-20	1.25	trace/visib	Brown	Initial turb	> 5,000 NTU
0859	0903	19.5-19	1.25	↓	↓		
0905	0912	18.5-18	1.25				
0913	0918	17.5-17	1.25				
0920	0923	16.5-16	1.25				
0924	0929	15.5-15	1.25				
0930	0933	14.5-14	1.25				
0934	0938	13.5-13	1.25				
0940	0943	12.5-12	1.25				
0944	0946	11.5-11	1.25				
0948	0950	10.5-10	1.25				
0952	0954	9.5-9	1.25				
0955	0957	8.5-8	1.25				
0959	1002	7.5-7	1.25				
1004	1008	6.5-6	1.25				
1010	1015	5.5-5	1.25				
1017	1023	4.5-4	1.25				
1024	1026	3.5-3	1.25				
1027	1029	2.5-2	1.25				
1033	1035	1.5-1	1.25			Final > 5,000 NTU	Let equilibrate check
1225	1228	10-10.5	1	turb = 8.66 NTU		Mounding	

\*TD = Total Depth of Well @1228

PURGE WATER DISPOSITION: Drum DRUM NUMBERS / LOCATION: 1

RELATIVE RECOVERY RATE: See comments (Rapid - Moderate - Slow) FINAL WELL DEPTH < MP: 37.6 ft. SHEEN / ODOR? \_\_\_\_\_

COMMENTS: Total volume purged = 25 gal via waterira, CW @ 15.00' then @ 13.30' (5 min elapsed)

CASING CAP LEFT LOOSE OR TIGHT? (Tight) WAS ALL SEDIMENT REMOVED? Yes

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$$2" \times \frac{11}{12"} = 70.1667' = r = 0.0833$$

$$\pi (0.0833)^2 = 0.02 \text{ ft}^2 \times 1 \text{ ft} = 0.02 \text{ ft}^3 \times 7.48 \text{ gal} = 0.15 \text{ gal}$$

OWNER / LOCATION: Sound Transit / FW/E - Federal Way Transit Center DATE: 06/23/22  
 WELL NO: FL358-MN7 WEATHER: Clear, 70's PERSONNEL: MEH, JXS  
 ECOLOGY TAG NO: BNL 564 MEASURING POINT (MP): PUC TOC  
 LOCK NO. OR COMBINATION: \_\_\_\_\_ CASING DIA: 2 in. CASING: 0.163 gal / ft. TIME / PID HEADSPACE: \_\_\_\_\_ ppm  
 CASING STICKDOWN < OPEN MON. RIM: \_\_\_\_\_ ft. MON. HEIGHT: \_\_\_\_\_ ft. MONUMENT TYPE & DIA: \_\_\_\_\_ in.  
 SURGE BLOCK TYPE: plastic PRODUCT THICKNESS: \_\_\_\_\_ ft. PRODUCT MEASUREMENT METHOD: \_\_\_\_\_  
 TIME / STATIC WL < MP: 10:11 / 11.61 ft. DEVELOPMENT METHOD: (Bailer-SS, Teflon, HDPE) (Hand Water) (Powered Water) (Other \_\_\_\_\_)  
 TIME / VWP READING: \_\_\_\_\_ (Digits, Temp.) VWP READOUT BOX ID: \_\_\_\_\_ DECON. METHOD: \_\_\_\_\_  
 WELL DEPTH < MP: 33.40 ft. (Hard or Soft?) WATER COLUMN HEIGHT: 21.79 ft. VOLUME IN WELL: 3.55 gal.  
 WATER VOLUME ADDED? \_\_\_\_\_ (Tap or Distilled?) VOLUME PURGED: 25 gal. REPAIRS NEEDED? \_\_\_\_\_  
 MEANS OF SEDIMENT MEASUREMENT IN PURGE WATER: bucket settlement SCREEN LENGTH: 20 ft.

FIELD PARAMETERS

START TIME/ WATER VOLUME ADDED, if any (gal)	END TIME	INTERVAL SURGED/ PURGED (ft > TD*)	TOTAL VOLUME PURGED (gal)	SEDIMENT THICKNESS (in or ml)	COLOR/ ODOR/ SHEEN?	FIELD PARAMETERS, if any (including units)	
10:28	10:48	20.5-20.0	1.25	trace	tan/brown		
10:50	10:57	19.5-19.0	1.25	trace	tan/brown		
11:01	11:06	18.5-18.0	1.25	trace	tan/brown		
11:09	11:14	17.5-17.0	1.25	trace	tan/brown		
11:18	11:25	16.5-16.0	1.25	trace	tan/brown		
11:27	11:33	15.5-15.0	1.25	trace	Brown		
11:54	12:01	14.5-14.0	1.25	trace	Brown		
12:03	12:10	13.5-13.0	1.25	trace	Brown		
12:13	12:20	12.5-12.0	1.25	trace	Brown		
12:25	12:28	11.5-11.0	1.25	trace	Brown		
12:33	12:35	10.5-10.0	1.25	trace	Brown		
12:38	12:41	9.5-9.0	1.25	trace	Brown		
12:42	12:44	8.5-8.0	1.25	trace	Brown		
12:45	12:48	7.5-7.0	1.25	trace	Brown		
12:49	12:51	6.5-6.0	1.25	trace	Brown		
12:53	12:55	5.5-5.0	1.25	trace	Brown		
12:58	1:00	4.5-4.0	1.25	trace	Brown		
1:01	1:03	3.5-3.0	1.25	trace	Brown		
1:05	1:08	2.5-2.0	1.25	4 gal	Brown		
1:09	1:12	1.5-1.0	1.25	0.5-0.75	inches total sediment removed		
15:52	15:55	10.5-10	0.5	Turb = 5.45 NTU			

\*TD = Total Depth of Well

PURGE WATER DISPOSITION: Drum DRUM NUMBERS / LOCATION: 1  
 RELATIVE RECOVERY RATE: \_\_\_\_\_ (Rapid - Moderate - Slow) FINAL WELL DEPTH < MP: 33.4 ft. SHEEN / ODOR? N  
 COMMENTS: \_\_\_\_\_  
 CASING CAP LEFT LOOSE OR TIGHT? TIGHT WAS ALL SEDIMENT REMOVED? /

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 6125  
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OWNER / LOCATION: Sound Transit / FWCE - Federal Way Transit Center DATE: 6/21/22, 6/23/22  
 WELL NO: FL350-MW8 WEATHER: cloudy, 60's-70's F PERSONNEL: MEH  
 ECOLOGY TAG NO: BNL 562 MEH MEASURING POINT (MP): RVC 10C  
 LOCK NO. OR COMBINATION: BNL 562 CASING DIA: 2 in. CASING: 0.163 gal / ft. TIME / PID HEADSPACE: \_\_\_\_\_ ppm  
 CASING STICKDOWN < OPEN MON. RIM: N/A ft. MON. HEIGHT: \_\_\_\_\_ ft. MONUMENT TYPE & DIA: \_\_\_\_\_ in.  
 SURGE BLOCK TYPE: Plastic PRODUCT THICKNESS: \_\_\_\_\_ ft. PRODUCT MEASUREMENT METHOD: \_\_\_\_\_  
 TIME / STATIC WL < MP: 12:55/9.65 ft. DEVELOPMENT METHOD: (Bailer-SS, Teflon, HDPE) (Hand Waterra) (Powered Waterra) (Other \_\_\_\_\_)  
 TIME / VWP READING: \_\_\_\_\_ (Digits, Temp.) VWP READOUT BOX ID: \_\_\_\_\_ DECON. METHOD: \_\_\_\_\_  
 WELL DEPTH < MP: 37.60 ft. (Hard or Soft?) WATER COLUMN HEIGHT: 27.95 ft. VOLUME IN WELL: 4.56 gal.  
 WATER VOLUME ADDED? \_\_\_\_\_ (Tap or Distilled?) VOLUME PURGED: 25 gal. REPAIRS NEEDED? \_\_\_\_\_  
 MEANS OF SEDIMENT MEASUREMENT IN PURGE WATER: bucket settlement SCREEN LENGTH: 20 ft.

FIELD PARAMETERS

START TIME/ WATER VOLUME ADDED, if any (gal)	END TIME	INTERVAL SURGED/ PURGED (ft > TD*)	TOTAL VOLUME PURGED (gal)	SEDIMENT THICKNESS (in or ml)	COLOR/ ODOR/ SHEEN?	FIELD PARAMETERS, if any (including units)
<del>12:58</del> 1:09	1:10	20.5-22.0	1.25	trace	tan/gray	Turbidity (NTU) 1207
1:31	1:37	19.5-19.0	1.25	trace	tan/gray	
1:39	1:45	18.5-18.0	1.25	trace	"	
1:47	1:51	17.5-17.0	1.25	trace	"	
1:55	2:03	16.5-16.0	1.25	trace	"	
2:09	2:15	15.5-15.0	1.25	trace	"	ERR 4
2:18	2:23	14.5-14.0	1.25	trace	"	
2:27	2:32	13.5-13.0	1.25	trace	"	
2:35	2:41	12.5-12.0	1.25	trace	"	
2:43	2:48	11.5-11.0	1.25	trace	"	
2:50	2:57	10.5-10.0	1.25	trace	"	ERR 4
3:00	3:03	9.5-9.0	1.25	trace	"	
3:06	3:13	8.5-8.0	1.25	trace	"	
3:15	3:22	7.5-7.0	1.25	trace	"	
3:24	3:30	6.5-6.0	1.25	trace	"	
3:33	3:39	5.5-5.0	1.25	trace	"	ERR 4
3:45	3:49	4.5-4.0	1.25	trace	"	
3:52	3:55	3.5-3.0	1.25	trace	"	
4:08	4:06	2.5-2.0	1.25	trace	"	
4:09	4:17	1.5-1.0	1.25	trace	"	ERR 4

\*TD = Total Depth of Well

PURGE WATER DISPOSITION: Drum DRUM NUMBERS / LOCATION: 1

RELATIVE RECOVERY RATE: \_\_\_\_\_ (Rapid - Moderate - Slow) FINAL WELL DEPTH < MP: 37.6 ft. SHEEN / ODOR? \_\_\_\_\_

COMMENTS: Turbidity reading @ MW8 on 6/23/22 = 0.97 NTU (15ft above BOW)

CASING CAP LEFT LOOSE OR TIGHT? WAS ALL SEDIMENT REMOVED? /

6/21/18 ~ MEH  
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OWNER / LOCATION: Squad Transit / FUCE - Federal Way Transit Center DATE: 06/22/22, 6/23  
 WELL NO: FL358-MW9 WEATHER: Cloudy, 70's PERSONNEL: MEH  
 ECOLOGY TAG NO: BNL-S63 MEASURING POINT (MP): PUC TOC  
 LOCK NO. OR COMBINATION: \_\_\_\_\_ CASING DIA: 2 in. CASING: 0.163 gal / ft. TIME / PID HEADSPACE: \_\_\_\_\_ ppm  
 CASING STICKDOWN < OPEN MON. RIM: \_\_\_\_\_ ft. MON. HEIGHT: \_\_\_\_\_ ft. MONUMENT TYPE & DIA: \_\_\_\_\_ in.  
 SURGE BLOCK TYPE: plastic PRODUCT THICKNESS: \_\_\_\_\_ ft. PRODUCT MEASUREMENT METHOD: \_\_\_\_\_  
 TIME / STATIC WL < MP: 2:22/12.58 ft. DEVELOPMENT METHOD: (Bailer-SS, Teflon, HDPE) (Hand Waterra) (Powered Waterra) (Other \_\_\_\_\_)  
 TIME / VWP READING: \_\_\_\_\_ (Digits, Temp.) VWP READOUT BOX ID: \_\_\_\_\_ DECON. METHOD: \_\_\_\_\_  
 WELL DEPTH < MP: 41.44 ft. (Hard or Soft?) WATER COLUMN HEIGHT: 28.92 ft. VOLUME IN WELL: 4.71 gal.  
 WATER VOLUME ADDED? \_\_\_\_\_ (Tap or Distilled?) VOLUME PURGED: 25 gal. REPAIRS NEEDED? \_\_\_\_\_  
 MEANS OF SEDIMENT MEASUREMENT IN PURGE WATER: bucket settlement SCREEN LENGTH: 20 ft.

FIELD PARAMETERS

START TIME/ WATER VOLUME ADDED, if any (gal)	END TIME	INTERVAL SURGED/ PURGED (ft > TD*)	TOTAL VOLUME PURGED (gal)	SEDIMENT THICKNESS (in or ml)	COLOR/ ODOR/ SHEEN?	FIELD PARAMETERS, if any (including units)	
2:41	2:47	20.5-20.0	1.25	trace	gray		
2:52	2:57	19.5-19.0	1.25	trace	gray		
3:01	3:03	18.5-18.0	1.25	trace	gray		
3:06	3:08	17.5-17.0	1.25	trace	gray		
3:11	3:13	16.5-16.0	1.25	trace	gray		
3:15	3:20	15.5-15.0	1.25	trace	gray		
3:27	3:34	14.5-14.0	1.25	trace	gray		
3:37	3:41	13.5-13.0	1.25	trace	gray		
3:46	3:48	12.5-12.0	1.25	trace	gray		
3:52	3:56	11.5-11.0	1.25	trace	gray		
3:58	4:01	10.5-10.0	1.25	trace	gray		
4:02	4:05	9.5-9.0	1.25	trace	gray		
4:07	4:11	8.5-8.0	1.25	trace	gray		
4:13	4:16	7.5-7.0	1.25	trace	gray		
4:19	4:21	6.5-6.0	1.25	trace	gray		
4:25	4:27	5.5-5.0	1.25	trace	gray		
4:29	4:31	4.5-4.0	1.25	trace	gray		
4:32	4:35	3.5-3.0	1.25	trace	gray		
4:36	4:38	2.5-2.0	1.25	trace	gray		
4:40	4:42	1.5-1.0	1.25	trace	gray/bulkier		

\*TD = Total Depth of Well

PURGE WATER DISPOSITION: Drum DRUM NUMBERS / LOCATION: 1  
 RELATIVE RECOVERY RATE: \_\_\_\_\_ (Rapid - Moderate - Slow) FINAL WELL DEPTH < MP: \_\_\_\_\_ ft. SHEEN / ODOR? \_\_\_\_\_  
 COMMENTS: Turbidity reading @ MW 9 on 6/23/22 = 0.98 NTU (10 ft above BOW)  
 CASING CAP LEFT LOOSE OR TIGHT? TIGHT WAS ALL SEDIMENT REMOVED? ✓

6122  
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OWNER / LOCATION: Sand Transit / Federal Way Transit Center (FWLE) DATE: 6/16/22  
 WELL NO: FL358-MW10 WEATHER: part cloud, 50's PERSONNEL: NAC/MEH  
 ECOLOGY TAG NO: BWL-SS8 MEASURING POINT (MP): PVC TDC, 6 inch mesh  
 LOCK NO. OR COMBINATION: — CASING DIA: 2 in. CASING: 0.163 gal / ft. TIME / PID HEADSPACE: — ppm  
 CASING STICKDOWN < OPEN MON. RIM: 0.31 ft. MON. HEIGHT: 0 ft. MONUMENT TYPE & DIA: flush mount, 8.5" dia.  
 SURGE BLOCK TYPE: 1.5" / S.S. PRODUCT THICKNESS: 1.5 ft. PRODUCT MEASUREMENT METHOD: TD type.  
 TIME / STATIC WL < MP: 1142 / 1151' ft. DEVELOPMENT METHOD: (Bailer-SS, Teflon, HDPE) (Hand Waterra) (Powered Waterra) (Other —)  
 TIME / VWP READING: — (Digits, Temp.) VWP READOUT BOX ID: — DECON. METHOD: soap / rinse  
 WELL DEPTH < MP: 38.00 ft. (Hard or Soft?) WATER COLUMN HEIGHT: 26.44 ft. VOLUME IN WELL: 4.3 gal.  
 WATER VOLUME ADDED? — (Tap or Distilled?) VOLUME PURGED: 30 gal. REPAIRS NEEDED? —  
 MEANS OF SEDIMENT MEASUREMENT IN PURGE WATER: visual in bucket SCREEN LENGTH: 20 ft.

FIELD PARAMETERS

START TIME/ WATER VOLUME ADDED, if any (gal)	END TIME	INTERVAL SURGED/ PURGED (ft > TD*)	TOTAL VOLUME PURGED (gal)	SEDIMENT THICKNESS (in or ml)	COLOR/ ODOR/ SHEEN?	FIELD PARAMETERS, if any (including units)	
1107	1107	20.5-19.5	1.05	trace	tan/brown	1128	Waterra stopped
1109	1112	19.5-18.5	1.25	"	"		free min. residue
1114	1117	18.5-17.5	1.25	"	"		by hand
1119	1122	17.5-16.5	1.25	"	"		
1125	1127	16.5-15.5	1.25	"	"		
1128	1130	15.5-14.5	1.25	"	"		
1137	1139	14.5-13.5	1.25	"	"		
1141	1143	13.5-12.5	1.25	"	"	very turbid, cannot read	
1143	1145	12.5-11.5	1.25	"	"	"	"
1145	1147	11.5-10.5	1.25	"	"		
1153	1154	10.5-9.5	1.25	"	"		
1155	1156	9.5-8.5	1.25	"	"		
1157	1158	8.5-7.5	1.25	"	"		
1159	1200	7.5-6.5	1.25	"	"		
1201	1202	6.5-5.5	1.25	"	"	very turbid, cannot read.	
1203	1204	5.5-4.5	1.25	"	"		
1207	1209	4.5-3.5	1.25	"	"	very turbid.	
1210	1211	3.5-2.5	1.25	"	"		
1211	1212	2.5-1.5	1.25	"	"		
1215	1221	1.5-0.5	6	"	"	very turbid.	
1020	1023	15.5-15	0.5	NTU = 222, 109		for turb	

\*TD = Total Depth of Well

PURGE WATER DISPOSITION: turbid, near opaque DRUM NUMBERS / LOCATION: 1 / at well  
 RELATIVE RECOVERY RATE: — (Rapid Moderate -Slow) FINAL WELL DEPTH < MP: 38.75 ft. SHEEN / ODOR? no  
 COMMENTS: hand develop after 1st interval, test interval using SS. tip to remove sediment.  
 CASING CAP LEFT LOOSE OR TIGHT? loose WAS ALL SEDIMENT REMOVED? yes.

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# WELL DEVELOPMENT LOG

JOB NO. 105774-050  
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OWNER / LOCATION: Sand Transit / Full Federal Way Transit Center DATE: 6/1/22  
 WELL NO: FL358-MW11 WEATHER: part clud, 60's PERSONNEL: NIAC/MEHT  
 ECOLOGY TAG NO: BAL 559 MEASURING POINT (MP): PVC TIC in  
 LOCK NO. OR COMBINATION: — CASING DIA: 2 in. CASING: 0.163 gal / ft. TIME / PID HEADSPACE: — ppm  
 CASING STICKDOWN < OPEN MON. RIM: 6.31 ft. MON. HEIGHT: 0 ft. MONUMENT TYPE & DIA: flush vent, 8 in.  
 SURGE BLOCK TYPE: plastic/s.s. PRODUCT THICKNESS: 0.3 ft. PRODUCT MEASUREMENT METHOD: TD tape  
 TIME / STATIC WL < MP: 1305/10.50 ft. DEVELOPMENT METHOD: (Bailer-SS, Teflon, HDPE) (Hand Waterra) (Powered Waterra) (Other: —)  
 TIME / VWP READING: — (Digits, Temp.) VWP READOUT BOX ID: — DECON. METHOD: Soap/water  
 WELL DEPTH < MP: 35.35 ft. (Hard or Soft?) WATER COLUMN HEIGHT: 24.85 ft. VOLUME IN WELL: 4.1 gal.  
 WATER VOLUME ADDED? — (Tap or Distilled?) VOLUME PURGED: 28 gal. REPAIRS NEEDED? —  
 MEANS OF SEDIMENT MEASUREMENT IN PURGE WATER: visual in bucket SCREEN LENGTH: 20 ft.

## FIELD PARAMETERS

START TIME/ WATER VOLUME ADDED, if any (gal)	END TIME	INTERVAL SURGED/ PURGED (ft > TD*)	TOTAL VOLUME PURGED (gal)	SEDIMENT THICKNESS (in or ml)	COLOR/ ODOR/ SHEEN?	FIELD PARAMETERS, if any (including units)
1350	1353	20.5-19.5	1.25	trace	to brown	Turbidity Very turbid, coarse red
1354	1357	19.5-18.5	1.25	"	"	
1400	1403	18.5-17.5	1.25	"	"	very turbid
1403	1405	17.5-16.5	1.25	"	"	
1406	1408	16.5-15.5	1.25	"	"	v. turbid
1409	1410	15.5-14.5	1.25	"	"	v. turbid.
1411	1412	14.5-13.5	1.25	"	"	
1413	1414	13.5-12.5	1.25	"	"	
1415	1417	12.5-11.5	1.25	"	"	v. turbid.
1418	1419	11.5-10.5	1.25	"	"	
1420	1421	10.5-9.5	1.25	"	"	
1422	1423	9.5-8.5	1.25	"	"	v. turbid.
1424	1425	8.5-7.5	1.25	"	"	
1426	1427	7.5-6.5	1.25	"	"	v. turbid.
1429	1430	6.5-5.5	1.25	"	"	
1431	1432	5.5-4.5	1.25	"	"	
1433	1434	4.5-3.5	1.25	"	"	
1436	1438	3.5-2.5	1.25	"	"	v. turbid
1440	1441	2.5-1.5	1.25	"	"	
1442	1443	1.5-0.5	1.25	"	"	v. turbid.
1449	1458	60-0.0	3	"	"	removed all sediment from sump
1645	1648	10.5-9.5	0.5	Turb =	0.54 NTU	

\*TD = Total Depth of Well  
 PURGE WATER DISPOSITION: turbid, near opaque DRUM NUMBERS / LOCATION: 1 / at well  
 RELATIVE RECOVERY RATE: — (Rapid - Moderate - Slow) FINAL WELL DEPTH < MP: 35.35 ft. SHEEN / ODOR? no  
 COMMENTS: hand develop w/ plastic surge block / foot valve, cleaned out bottom w/ s.s. foot valve  
 CASING CAP LEFT LOOSE OR TIGHT? tight WAS ALL SEDIMENT REMOVED? yes

File name: J:\Support\Library\FIELD AND LAB FORMS\AutoCAD\_Well Development Log.dwg Date: 02-10-2011 11:58:52 AM Login: ssc

OWNER / LOCATION: Solid Transit / FWCE - Federal Way Transit Center DATE: 06/23/22  
 WELL NO: PL38-MWL2 WEATHER: Clear, 70's PERSONNEL: MEH, JKS  
 ECOLOGY TAG NO: BNL-565 MEASURING POINT (MP): PUC+OC  
 LOCK NO. OR COMBINATION: \_\_\_\_\_ CASING DIA: 2 in. CASING: 0.163 gal / ft. TIME / PID HEADSPACE: \_\_\_\_\_ ppm  
 CASING STICKDOWN < OPEN MON. RIM: \_\_\_\_\_ ft. MON. HEIGHT: \_\_\_\_\_ ft. MONUMENT TYPE & DIA: \_\_\_\_\_ in.  
 SURGE BLOCK TYPE: Plastic PRODUCT THICKNESS: \_\_\_\_\_ ft. PRODUCT MEASUREMENT METHOD: \_\_\_\_\_  
 TIME / STATIC WL < MP: 12.32 ft. DEVELOPMENT METHOD: (Bailer-SS, Teflon, HDPE) (Hand Water) (Powered Water) (Other \_\_\_\_\_)  
 TIME / VWP READING: \_\_\_\_\_ (Digits, Temp.) VWP READOUT BOX ID: \_\_\_\_\_ DECON. METHOD: \_\_\_\_\_  
 WELL DEPTH < MP: 32.63 ft. (Hard or Soft?) WATER COLUMN HEIGHT: 25.31 ft. VOLUME IN WELL: 4.13 gal.  
 WATER VOLUME ADDED? \_\_\_\_\_ (Tap or Distilled?) VOLUME PURGED: 25 gal. REPAIRS NEEDED? \_\_\_\_\_  
 MEANS OF SEDIMENT MEASUREMENT IN PURGE WATER: bucket settlement SCREEN LENGTH: 20 ft.

FIELD PARAMETERS

START TIME/ WATER VOLUME ADDED, if any (gal)	END TIME	INTERVAL SURGED/ PURGED (ft > TD*)	TOTAL VOLUME PURGED (gal)	SEDIMENT THICKNESS (in or ml)	COLOR/ ODOR/ SHEEN?	FIELD PARAMETERS, if any (including units)
14:15	14:19	20.5-20.0	1.25	trace	tan/brown	
14:21	14:26	19.5-19.0	1.25	trace	tan/brown	
14:28	14:31	18.5-18.0	1.25	trace	tan/brown	
14:35	14:41	17.5-17.0	1.25	trace	tan/brown	
14:43	14:46	16.5-16.0	1.25	trace	tan/brown	
14:49	14:51	15.5-15.0	1.25	trace	tan/brown	
14:53	14:57	14.5-14.0	1.25	trace	tan/brown	→ Strong sulfur smell
14:58	15:01	13.5-13.0	1.25	trace	tan/brown	
15:03	15:05	12.5-12.0	1.25	trace	tan/brown	
15:07	15:09	11.5-11.0	1.25	trace	tan/brown	
15:11	15:14	10.5-10.0	1.25	trace	tan/brown	NTU > 5K
15:17	15:19	9.5-9.0	1.25	trace	tan/brown	
15:20	15:23	8.5-8.0	1.25	trace	tan/brown	
15:24	15:26	7.5-7.0	1.25	trace	tan/brown	
15:28	15:30	6.5-6.0	1.25	trace	tan/brown	
15:31	15:33	5.5-5.0	1.25	trace	tan/brown	
15:34	15:37	4.5-4.0	1.25	trace	tan/brown	
15:41	15:43	3.5-3.0	1.25	trace	tan/brown	
15:44	15:46	2.5-2.0	1.25	trace	tan/brown	
15:47	15:48	1.5-1.0	1.25	trace	tan/brown	
16:02	16:05	10.5-10	0.5	Turb =	7.45 NTU	

\*TD = Total Depth of Well

PURGE WATER DISPOSITION: Down DRUM NUMBERS / LOCATION: 1  
 RELATIVE RECOVERY RATE: \_\_\_\_\_ (Rapid - Moderate - Slow) FINAL WELL DEPTH < MP: 37.7 ft. SHEEN / ODOR? \_\_\_\_\_  
 COMMENTS: \_\_\_\_\_  
 CASING CAP LEFT LOOSE OR TIGHT? \_\_\_\_\_ WAS ALL SEDIMENT REMOVED? /

@ 13:49

6/23/18

Filename: J:\Support\Library\FIELD AND LAB FORMS\AutoCAD\_Well Development Log.dwg Date: 02-10-2011 Login: sac

228

6124

OWNER / LOCATION: Somerset Transit / FWCE - Federal Way Transit Center DATE: 6/17/22, 6/20/22, 6/21/22  
 WELL NO: FL358-MW13 WEATHER: cloudy 40's PERSONNEL: NAC, MEH  
 ECOLOGY TAG NO: \_\_\_\_\_ MEASURING POINT (MP): PVC TDC in  
 LOCK NO. OR COMBINATION: \_\_\_\_\_ CASING DIA: 2 in. CASING: 0.163 gal / ft. TIME / PID HEADSPACE: \_\_\_\_\_ ppm  
 CASING STICKDOWN < OPEN MON. RIM: 0.19 ft. MON. HEIGHT: 0 ft. MONUMENT TYPE & DIA: flush mount, 8.5 in.  
 SURGE BLOCK TYPE: plastic / S.S. PRODUCT THICKNESS: \_\_\_\_\_ ft. PRODUCT MEASUREMENT METHOD: total depth in well  
 TIME / STATIC WL < MP: 1033/13.38 ft. DEVELOPMENT METHOD: (Bailer-SS, Teflon, HDPE) (Hand Waterra) (Powered Waterra) (Other \_\_\_\_\_)  
 TIME / VWP READING: \_\_\_\_\_ (Digits, Temp.) VWP READOUT BOX ID: \_\_\_\_\_ DECON. METHOD: surge lines  
 WELL DEPTH < MP: 41.05 ft. (Hard or Soft?) WATER COLUMN HEIGHT: 27.67 ft. VOLUME IN WELL: 4.5 gal.  
 WATER VOLUME ADDED? \_\_\_\_\_ (Tap or Distilled?) VOLUME PURGED: \_\_\_\_\_ gal. REPAIRS NEEDED? \_\_\_\_\_  
 MEANS OF SEDIMENT MEASUREMENT IN PURGE WATER: bucket settlement SCREEN LENGTH: 20 ft.

FIELD PARAMETERS

START TIME/ WATER VOLUME ADDED, if any (gal)	END TIME	INTERVAL SURGED/ PURGED (ft > TD*)	TOTAL VOLUME PURGED (gal)	SEDIMENT THICKNESS (in or ml)	COLOR/ ODOR/ SHEEN?	FIELD PARAMETERS, if any (including units)
0906	0913	20.5-20	1.25	0	tan / 1 smy	Turbidity (NTU) 1343
0924	0932	19.5-19.0	1.25	0	"	
0934	0939	18.5-18.0	1.25	0	"	
0941	0945	17.5-17.0	1.25	0	"	
0949	0954	16.5-16.0	1.25	0	"	755
0956	1000	15.5-15.0	1.25	trace	"	
1007	1010	14.5-14.0	1.25	trace	"	
1012	1016	13.5-13.0	1.25	trace	"	
1017	1020	12.5-12.0	1.25	trace	"	
1022	1027	11.5-11.0	1.25	trace	"	
1035	1037	10.5-10.0	1.25	trace	"	water level below surge interval start 6/20/22
<del>2:57</del>	<del>3:02</del>	<del>10.5-10.0</del>	<del>1.25</del>	<del>trace</del>	<del>MEH</del>	
<del>3:09</del>	<del>3:13</del>	<del>9.5-9.0</del>	<del>1.25</del>	<del>trace</del>	<del>MEH</del>	
<del>3:16</del>	<del>3:22</del>	<del>8.5-8.0</del>	<del>1.25</del>	<del>trace</del>	<del>MEH</del>	
<del>3:25</del>	<del>3:33</del>	<del>7.5-7.0</del>	<del>1.25</del>	<del>trace</del>	<del>MEH</del>	
<del>3:36</del>	<del>3:44</del>	<del>6.5-6.0</del>	<del>MEH</del>			
		<del>5.5-5.0</del>	<del>MEH</del>			top
		<del>4.5-4.0</del>	<del>MEH</del>			
		<del>3.5-3.0</del>	<del>MEH</del>			
		<del>2.5-2.0</del>	<del>MEH</del>			
		<del>1.5-1.0</del>	<del>MEH</del>			

\*TD = Total Depth of Well

PURGE WATER DISPOSITION: \_\_\_\_\_ DRUM NUMBERS / LOCATION: \_\_\_\_\_  
 RELATIVE RECOVERY RATE: \_\_\_\_\_ (Rapid - Moderate - Slow) FINAL WELL DEPTH < MP: \_\_\_\_\_ ft. SHEEN / ODOR? \_\_\_\_\_  
 COMMENTS: NTU reading @ MW10 = 0.54 NTU on 6/20/22 @ 10ft from BOW  
 CASING CAP LEFT LOOSE OR TIGHT? \_\_\_\_\_ WAS ALL SEDIMENT REMOVED? \_\_\_\_\_

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restart @ 6:05-10:00 6/20

move to correct field form (MW11)



OWNER / LOCATION: Sound Transit / AWE - Federal Way Transit Center DATE: 06/22/22  
 WELL NO: FL38-MW14 WEATHER: cloudy, 50's - 60's PERSONNEL: MEM  
 ECOLOGY TAG NO: BNL561 MEASURING POINT (MP): RJC TOC  
 LOCK NO. OR COMBINATION: — CASING DIA: 2 in. CASING: 0.163 gal / ft. TIME / PID HEADSPACE: — ppm  
 CASING STICKDOWN < OPEN MON. RIM: — ft. MON. HEIGHT: — ft. MONUMENT TYPE & DIA: — in.  
 SURGE BLOCK TYPE: plastic PRODUCT THICKNESS: — ft. PRODUCT MEASUREMENT METHOD: —  
 TIME / STATIC WL < MP: 8:05/12.01 ft. DEVELOPMENT METHOD: (Bailer-SS, Teflon, HDPE) (Hand Water) (Powered Water) (Other: —)  
 TIME / VWP READING: — (Digits, Temp.) VWP READOUT BOX ID: — DECON. METHOD: —  
 WELL DEPTH < MP: 38.91 ft. (Hard or Soft?) WATER COLUMN HEIGHT: 26.90 ft. VOLUME IN WELL: 4.38 gal.  
 WATER VOLUME ADDED? — (Tap or Distilled?) VOLUME PURGED: — gal. REPAIRS NEEDED? —  
 MEANS OF SEDIMENT MEASUREMENT IN PURGE WATER: bucket settlement SCREEN LENGTH: 20 ft.

FIELD PARAMETERS

START TIME/ WATER VOLUME ADDED, if any (gal)	END TIME	INTERVAL SURGED/ PURGED (ft > TD*)	TOTAL VOLUME PURGED (gal)	SEDIMENT THICKNESS (in or ml)	COLOR/ ODOR/ SHEEN?	FIELD PARAMETERS, if any (including units)
8:40	8:46	20.5-20.0	1.25	trace	tan/gray	
8:49	8:55	19.5-19.0	1.25	trace	tan/gray	
8:57	9:02	18.5-18.0	1.25	trace	tan/gray	
9:05	9:09	17.5-17.0	1.25	trace	tan/gray	
9:12	9:17	16.5-16.0	1.25	trace	tan/gray	
9:20	9:25	15.5-15.0	1.25	trace	tan/gray	
9:27	9:33	14.5-14.0	1.25	trace	tan/gray	
9:36	9:40	13.5-13.0	1.25	trace	tan/gray	
9:44	9:50	12.5-12.0	1.25	trace	tan/gray	
9:53	9:59	11.5-11.0	1.25	trace	tan/gray	
10:08	10:12	10.5-10.0	1.25	trace	tan/gray	
10:16	10:19	9.5-9.0	1.25	trace	tan/gray	
10:23	10:27	8.5-8.0	1.25	trace	tan/gray	
10:30	10:35	7.5-7.0	1.25	trace	tan/gray	
10:39	10:43	6.5-6.0	1.25	trace	tan/gray	
10:45	10:49	5.5-5.0	1.25	trace	tan/gray	
10:52	10:56	4.5-4.0	1.25	trace	tan/gray	
10:58	11:01	3.5-3.0	1.25	trace	tan/gray	
11:03	11:06	2.5-2.0	1.25	trace	tan/gray	
11:08	11:11	1.5-1.0	1.25	trace	tan/gray	

\*TD = Total Depth of Well

PURGE WATER DISPOSITION: — DRUM NUMBERS / LOCATION: —  
 RELATIVE RECOVERY RATE: — (Rapid - Moderate - Slow) FINAL WELL DEPTH < MP: — ft. SHEEN / ODOR? —  
 COMMENTS: Turbidity reading #1 @ MW10 = 222 NTU on 6/22/22 #2 = 197 NTU  
 CASING CAP LEFT LOOSE OR TIGHT? (15 ft from Bow) WAS ALL SEDIMENT REMOVED? —

~19  
 ~39  
 Moved to connect field form

Turbidity reading #1 @ MW14 = 9.73 NTU  
 #2 @ MW14 = 332 NTU  
 on 6/23/22

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Appendix C  
Purge Forms

APPENDIX C: PUGET FORMS

OWNER / LOCATION: Sound Transit / Federal Way Transit Center DATE: 6/30/2022  
 WELL NO: FL358-MW5A SAMPLE NO: FL358-MW5A-220630 ECOLOGY TAG NO: BNL 567 DUPLICATE NO: \_\_\_\_\_  
 WEATHER: Sunny, High 60s MS / MSD? Yes  No   
 WELL SITE CONDITIONS / MP DEFINITION: NORHL TDC  
 (MP is typically the north PVC rim)

SAMPLING DATA

TIME STARTED: 1115 LNAPL THICKNESS: \_\_\_\_\_ ft. Sample   
 PID HEAD SPACE: 1.6 ppm DNAPL THICKNESS: Checked ft. Sample   
 MP DISTANCE ABOVE / BELOW GROUND SURFACE: \_\_\_\_\_ ft.  
 TOTAL DEPTH OF WELL BELOW MP: 26 ft.  
 DTW BELOW MP: 10.33 ft.  
 WATER COLUMN IN WELL: 15.67 ft.  
 CASING DIAMETER: 2 in.  
 GALLONS PER FOOT: 0.16  
 GALLONS IN WELL: 2.51  
 TIME PURGING STARTED: 1120

SAMPLE CONTAINERS			
Number	Size	Type	Pres.

FIELD PARAMETERS

GALLONS REMOVED	TEMP. (C°)	ORP (mV)	pH	COND. (µmhos/cm)	D.O. (mg/L)	TURBIDITY (NTU)	SALINITY (%)	TDS (g/L)	COLOR	TIME	DTW
Initial	16.27	-14.1	7.53	434	4.97	191	0.21	0.283	Slightly cloudy	1130	10.55
0.5	14.32	-15.4	7.48	423	0.90	94.8	0.21	0.277	Slightly cloudy	1134	
1.0	14.16	-15.0	7.48	424	0.65	48.5	0.21	0.278	clear	1138	10.75
1.5	13.99	-16.4	7.45	418	0.36	37.9	0.20	0.272	clear	1142	
2.0	13.91	-18.8	7.45	416	0.27	37.0	0.20	0.270	clear	1146	10.74
2.5	13.80	-18.9	7.44	414	0.21	30.6	0.20	0.269	clear	1150	
3.0	13.82	-19.2	7.44	413	0.19	22.4	0.20	0.268	clear	1154	10.74
3.5	13.80	-19.2	7.43	410	0.20	22.8	0.20	0.267	clear	1158	
After Sampling											

EVACUATION METHOD: Bladder Pump  
 PUMP INTAKE DEPTH (if applicable): Mid Screen  
 PURGE WATER DISPOSITION (e.g., drum #): Drum on site  
 WATER QUALITY (e.g., sheen, odor): No sheen or odor  
 WATER QUALITY METER(S) USED; CALIBRATION DATE / TIME: YSI 5510 6/29/22 @ 0930  
 SAMPLING METHOD: EPA Low Flow SAMPLE TIME: 1210  
 SAMPLING PERSONNEL: MRH / JXS DUPLICATE "TIME": \_\_\_\_\_  
 REMARKS (e.g., recovery rate): \_\_\_\_\_

TIME COMPLETED: 1225

WELL CASING VOLUMES  
 Gal / ft 1-1/4" = 0.077 2" = 0.16 3" = 0.37 4" = 0.65  
 1-1/2" = 0.10 2-1/2" = 0.24 3-1/2" = 0.50 6" = 1.46

Filename: J:\Support\Library\FIELD AND LAB FORMS\AutoCAD\_LWater Sampling Log.dwg Date: 02-10-2011 Login: sac

OWNER / LOCATION: Sound Transit / Federal Way Transit center DATE: 6/30/2022  
 WELL NO: FL350-MW5B SAMPLE NO: FL350-MW5B-220630 ECOLOGY TAG NO: BNL 569 DUPLICATE NO: \_\_\_\_\_  
 WEATHER: Sunny, high 60s MS / MSD? Yes  No   
 WELL SITE CONDITIONS / MP DEFINITION: North TOC  
 (MP is typically the north PVC rim)

SAMPLING DATA

TIME STARTED: 1245 LNAPL THICKNESS: \_\_\_\_\_ ft. Sample   
 PID HEAD SPACE: 0.6 ppm DNAPL THICKNESS: checked ft. Sample   
 MP DISTANCE ABOVE / BELOW GROUND SURFACE: \_\_\_\_\_ ft.  
 TOTAL DEPTH OF WELL BELOW MP: 37 ft.  
 DTW BELOW MP: 9.59 ft.  
 WATER COLUMN IN WELL: 27.41 ft.  
 CASING DIAMETER: 2 in.  
 GALLONS PER FOOT: 0.16  
 GALLONS IN WELL: 4.39  
 TIME PURGING STARTED: 1254

SAMPLE CONTAINERS			
Number	Size	Type	Pres.

FIELD PARAMETERS

ORP

GALLONS REMOVED	TEMP. (C°)	EH (mV)	pH	COND. (µmhos/cm)	D.O. (mg/L)	TURBIDITY (NTU)	SALINITY (%)	TDS (g/L)	COLOR	TIME	DTW
Initial											
0.5	14.47	-47.5	7.72	327	0.71	4.46	0.16	0.212	clear	1308	
0.95	14.20	-53.1	7.71	326	0.54	2.89	0.16	0.212	clear	1302	10.17
1.0	14.12	-60.6	7.70	325	0.37	5.80	0.16	0.211	clear	1306	
1.5	14.17	-60.2	7.66	317	0.27	10.1	0.15	0.206	clear	1310	10.17
2.0	14.20	-45.7	7.63	305	0.20	30.6	0.15	0.198	sl turb	1315	
2.5	14.18	-38.0	7.64	302	0.20	21.5	0.14	0.196	sl turb	1319	10.18
3.0	14.18	-36.9	7.62	300	0.19	15.1	0.14	0.195	clear	1323	
3.5	14.18	-36.9	7.60	301	0.20	16.1	0.14	0.195	clear	1328	10.18
After Sampling	14.20	-36.1	7.57	300	0.18	15.3	0.14	0.195	clear	1332	

EVACUATION METHOD: Bladder pump  
 PUMP INTAKE DEPTH (if applicable): Mid Screen  
 PURGE WATER DISPOSITION (e.g., drum #): Drum on site  
 WATER QUALITY (e.g., sheen, odor): No sheen or odor  
 WATER QUALITY METER(S) USED; CALIBRATION DATE / TIME: VSI 596 6/29/22 @ 0930  
 SAMPLING METHOD: EPA Low Flow SAMPLE TIME: 1335  
 SAMPLING PERSONNEL: JXS DUPLICATE "TIME": \_\_\_\_\_  
 REMARKS (e.g., recovery rate): \_\_\_\_\_

TIME COMPLETED: 1400

WELL CASING VOLUMES

Gal / ft 1-1/4" = 0.077 2" = 0.16 3" = 0.37 4" = 0.65  
 1-1/2" = 0.10 2-1/2" = 0.24 3-1/2" = 0.50 6" = 1.46

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OWNER / LOCATION: Sound Transit / Federal <sup>Way</sup> Transit Center  
 DATE: 6/30/2022  
 WELL NO: FL358-MW6 SAMPLE NO: FL358-MW6-220630 ECOLOGY TAG NO: BNL 506 DUPLICATE NO: \_\_\_\_\_  
 WEATHER: Sunny, mid 60s MS / MSD?  Yes  No  
 WELL SITE CONDITIONS / MP DEFINITION: North TOL  
 (MP is typically the north PVC rim)

SAMPLING DATA

TIME STARTED: 0940 LNAPL THICKNESS: \_\_\_\_\_ ft. Sample   
 PID HEAD SPACE: 0 ppm DNAPL THICKNESS: Checked Sample   
 MP DISTANCE ABOVE / BELOW GROUND SURFACE: \_\_\_\_\_ ft.  
 TOTAL DEPTH OF WELL BELOW MP: 37 ft.  
 DTW BELOW MP: 11.84 ft.  
 WATER COLUMN IN WELL: 25.16 ft.  
 CASING DIAMETER: 2 in.  
 GALLONS PER FOOT: 0.16  
 GALLONS IN WELL: 4.03  
 TIME PURGING STARTED: 1010

SAMPLE CONTAINERS			
Number	Size	Type	Pres.

FIELD PARAMETERS

GALLONS REMOVED	TEMP. (C°)	<del>ORP</del> ORP (mV)	pH	COND. (µmhos/cm)	D.O. (mg/L)	TURBIDITY (NTU)	SALINITY (%)	TDS (g/L)	COLOR	TIME	DTW
Initial	14.94	11.7	7.38	503	5.55	92.1	0.24	0.327	slight cloudy	1012	12.39
0.5	14.18	10.3	7.36	505	1.26	105.3	0.25	0.329	slight cloudy	1016	
1.0	13.92	7.1	7.37	507	0.76	42.6	0.25	0.330	clear	1020	12.75
1.5	13.81	5.6	7.35	506	0.52	23.9	0.25	0.329	clear	1024	
2.0	13.84	4.9	7.34	506	0.39	21.0	0.25	0.329	clear	1028	12.79
2.5	13.77	7.8	7.32	505	0.34	18.3	0.25	0.329	clear	1032	
3.0	13.79	7.8	7.30	507	0.29	18.1	0.25	0.329	clear	1036	12.81
3.5	13.77	7.7	7.30	505	0.30	11.7	0.25	0.328	clear	1040	
After Sampling											

EVACUATION METHOD: Bladder Pump  
 PUMP INTAKE DEPTH (if applicable): Mid screen  
 PURGE WATER DISPOSITION (e.g., drum #): Drum on site  
 WATER QUALITY (e.g., sheen, odor): No sheen or odor  
 WATER QUALITY METER(S) USED; CALIBRATION DATE / TIME: YSI 596 - 6/29/22 0930  
 SAMPLING METHOD: EPA LOW FLOW SAMPLE TIME: 1100  
 SAMPLING PERSONNEL: MRH / JXS DUPLICATE TIME: \_\_\_\_\_  
 REMARKS (e.g., recovery rate): \_\_\_\_\_

TIME COMPLETED: 1110

WELL CASING VOLUMES

Gal / ft 1-1/4" = 0.077 2" = 0.16 3" = 0.37 4" = 0.65  
 1-1/2" = 0.10 2-1/2" = 0.24 3-1/2" = 0.50 6" = 1.46

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OWNER / LOCATION: Sound Transit / Federal Way Transit Center DATE: 6/29/2022  
 WELL NO: FL358-MW7 SAMPLE NO: FL358-MW7-200629 ECOLOGY TAG NO: BNL 564 DUPLICATE NO: —  
 WEATHER: Cloudy, mid 50s MS / MSD?  Yes  No  
 WELL SITE CONDITIONS / MP DEFINITION: North Top of casing  
 (MP is typically the north PVC rim)

SAMPLING DATA

TIME STARTED: 0945 LNAPL THICKNESS: \_\_\_\_\_ ft. Sample   
 PID HEAD SPACE: 0.3 ppm DNAPL THICKNESS: \_\_\_\_\_ ft. Sample   
 MP DISTANCE ABOVE / BELOW GROUND SURFACE: \_\_\_\_\_ ft.  
 TOTAL DEPTH OF WELL BELOW MP: 34 ft.  
 DTW BELOW MP: 11.83 ft.  
 WATER COLUMN IN WELL: 22.17 ft.  
 CASING DIAMETER: 2 in.  
 GALLONS PER FOOT: 0.16  
 GALLONS IN WELL: 3.55  
 TIME PURGING STARTED: 1017

SAMPLE CONTAINERS			
Number	Size	Type	Pres.

FIELD PARAMETERS

GALLONS REMOVED	TEMP. (C°)	<sup>ORP</sup> -Eh (mV)	pH	COND. (umhos/cm)	D.O. (mg/L)	TURBIDITY (NTU)	SALINITY (%)	TDS (g/L)	COLOR	TIME	DTW
Initial	13.54	-41.7	7.40	825	4.83	96.8	0.41	0.535	Slight cloudy	1020	12.15
0.5	13.35	-39.6	7.48	760	1.21	58.6	0.37	0.470	clear	1024	
1.0	13.34	-44.3	7.52	710	0.94	31.5	0.35	0.468	clear	1028	12.21
1.5	13.46	-45.9	7.54	710	1.02	18.6	0.35	0.461	clear	1032	
2.0	13.47	-46.2	7.55	705	0.65	14.7	0.35	0.458	clear	1036	12.22
2.5	13.48	-46.5	7.55	707	0.68	7.76	0.35	0.460	clear	1040	
3.0	13.49	-46.4	7.55	707	0.64	6.22	0.35	0.459	clear	1044	12.21
3.5	13.49	-46.0	7.56	704	0.63	5.47	0.34	0.454	clear	1048	
After Sampling											

EVACUATION METHOD: Bladder Pump  
 PUMP INTAKE DEPTH (if applicable): Mid screen  
 PURGE WATER DISPOSITION (e.g., drum #): Drum on site  
 WATER QUALITY (e.g., sheen, odor): No sheen or odor  
 WATER QUALITY METER(S) USED; CALIBRATION DATE / TIME: YSE 596 - 6/29/22 0930  
 SAMPLING METHOD: EPA low flow SAMPLE TIME: 1100  
 SAMPLING PERSONNEL: MCH & JXS DUPLICATE "TIME":    
 REMARKS (e.g., recovery rate):  

TIME COMPLETED: 1125

WELL CASING VOLUMES

Gal / ft 1-1/4" = 0.077 2" = 0.16 3" = 0.37 4" = 0.65  
 1-1/2" = 0.10 2-1/2" = 0.24 3-1/2" = 0.50 6" = 1.46

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OWNER / LOCATION: Sound Transit / Federal Way Transit Station DATE: 6/28/22  
 WELL NO: FL358-MWB SAMPLE NO: FL358-MWB-220628 ECOLOGY TAG NO: BNL 562 DUPLICATE NO: \_\_\_\_\_  
 WEATHER: cloudy, mid 60s MS / MSD? Yes  No   
 WELL SITE CONDITIONS / MP DEFINITION: Norm TOC  
 (MP is typically the north PVC rim)

SAMPLING DATA

TIME STARTED: 1145 LNAPL THICKNESS: \_\_\_\_\_ ft. Sample   
 PID HEAD SPACE: 0 ppm DNAPL THICKNESS: \_\_\_\_\_ ft. Sample   
 MP DISTANCE ABOVE / BELOW GROUND SURFACE: \_\_\_\_\_ ft.  
 TOTAL DEPTH OF WELL BELOW MP: 38 ft.  
 DTW BELOW MP: 9.85 ft.  
 WATER COLUMN IN WELL: 28.15 ft.  
 CASING DIAMETER: 2 in.  
 GALLONS PER FOOT: 0.16  
 GALLONS IN WELL: 4.50  
 TIME PURGING STARTED: 1155

SAMPLE CONTAINERS			
Number	Size	Type	Pres.

FIELD PARAMETERS

GALLONS REMOVED	TEMP. (C°)	ORP (mV)	pH	COND. (µmhos/cm)	D.O. (mg/L)	TURBIDITY (NTU)	SALINITY (%)	TDS (g/L)	COLOR	TIME	DTW
Initial	13.70	65.5	7.34	397	2.70	226	0.19	0.258	slight cloudy	1150	10.45
0.5	13.40	69.5	7.31	393	1.06	197	0.19	0.255	slight cloudy	1200	
1.0	13.32	66.9	7.36	390	0.65	191	0.19	0.253	slight cloudy	1204	10.58
1.5	13.29	64.6	7.37	389	0.45	175	0.19	0.253	slight cloudy	1208	
2.0	13.25	64.8	7.40	389	0.41	126	0.19	0.253	slight cloudy	1212	10.61
2.5	13.23	64.5	7.41	388	0.36	68.3	0.19	0.252	clear	1216	
3.0	13.20	63.7	7.41	389	0.33	34.0	0.19	0.253	clear	1220	
3.5	13.19	62.9	7.42	389	0.32	14.0	0.19	0.253	clear	1224	10.68
4.0	13.20	61.3	7.43	388	0.30	8.17	0.19	0.252	clear	1228	
After Sampling											

EVACUATION METHOD: Bladder Pump  
 PUMP INTAKE DEPTH (if applicable): Mid screen  
 PURGE WATER DISPOSITION (e.g., drum #): Drum on site  
 WATER QUALITY (e.g., sheen, odor): No sheen or odor  
 WATER QUALITY METER(S) USED; CALIBRATION DATE / TIME: YSI 556 - 6/28/22 0900  
 SAMPLING METHOD: EPA Low Flow SAMPLE TIME: 1235  
 SAMPLING PERSONNEL: MKH & JXS DUPLICATE "TIME": \_\_\_\_\_  
 REMARKS (e.g., recovery rate): \_\_\_\_\_

TIME COMPLETED: 1255

WELL CASING VOLUMES

Gal / ft 1-1/4" = 0.077 2" = 0.16 3" = 0.37 4" = 0.65  
 1-1/2" = 0.10 2-1/2" = 0.24 3-1/2" = 0.50 6" = 1.46

Filename: J:\Support\Library\FIELD AND LAB FORMS\AutoCAD\Water Sampling Log.dwg Date: 02-10-2011 Login: sac

OWNER / LOCATION: Sound Transit / Federal Way Transit Center DATE: 6/28/22  
 WELL NO: FL358-MW9 SAMPLE NO: FL358-MW9-220628 ECOLOGY TAG NO: BNL 563 DUPLICATE NO: FL358-MW100-220628  
 WEATHER: Cloudy, Mid 60s MS / MSD? Yes  No   
 WELL SITE CONDITIONS / MP DEFINITION: North TOL  
 (MP is typically the north PVC rim)

SAMPLING DATA

TIME STARTED: 1330 LNAPL THICKNESS: \_\_\_\_\_ ft. Sample   
 PID HEAD SPACE: Ø ppm DNAPL THICKNESS: \_\_\_\_\_ ft. Sample   
 MP DISTANCE ABOVE / BELOW GROUND SURFACE: \_\_\_\_\_ ft.  
 TOTAL DEPTH OF WELL BELOW MP: 41 ft.  
 DTW BELOW MP: 12.71 ft.  
 WATER COLUMN IN WELL: 28.29 ft.  
 CASING DIAMETER: 2 in.  
 GALLONS PER FOOT: 0.16  
 GALLONS IN WELL: 4.53  
 TIME PURGING STARTED: 1352

SAMPLE CONTAINERS			
Number	Size	Type	Pres.

FIELD PARAMETERS

GALLONS REMOVED	TEMP. (C°)	<sup>ORP</sup> EIT (mV)	pH	COND. (µmhos / cm)	D.O. (mg / L)	TURBIDITY (NTU)	SALINITY (%)	TDS (g/L)	COLOR	TIME	DTW
Initial	14.58	-54.5	7.43	462	5.70	38.9	0.22	0.300	clear	1353	12.94
0.5	13.49	-57.7	7.47	462	1.15	21.8	0.22	0.300	clear	1357	
1.0	13.40	-59.3	7.49	462	0.96	15.8	0.22	0.300	clear	1401	12.97
1.5	13.51	-60.1	7.51	462	0.72	8.84	0.22	0.300	clear	1405	
2.0	13.51	-62.9	7.52	463	0.63	8.94	0.22	0.301	clear	1409	12.95
2.5	13.54	-65.2	7.53	463	0.51	8.59	0.22	0.301	clear	1413	
3.0	13.54	-65.7	7.53	464	0.35	5.81	0.22	0.302	clear	1417	12.96
3.5	13.57	-65.5	7.52	464	0.31	6.70	0.22	0.302	clear	1421	
4.0	13.50	-63.5	7.53	464	0.29	6.32	0.22	0.302	clear	1425	12.97
After Sampling											

EVACUATION METHOD: Bladder pump  
 PUMP INTAKE DEPTH (if applicable): Mid screen  
 PURGE WATER DISPOSITION (e.g., drum #): Drum on site  
 WATER QUALITY (e.g., sheen, odor): No sheen, slight sulphur odor  
 WATER QUALITY METER(S) USED; CALIBRATION DATE / TIME: YSE 556 - 6/28/22 0900  
 SAMPLING METHOD: EPA Low Flow SAMPLE TIME: 1435  
 SAMPLING PERSONNEL: MRH & JXS DUPLICATE "TIME": 1600  
 REMARKS (e.g., recovery rate): collected field duplicate FL358-MW100-220628

TIME COMPLETED: 1510

WELL CASING VOLUMES

Gal / ft 1-1/4" = 0.077 2" = 0.16 3" = 0.37 4" = 0.65  
 1-1/2" = 0.10 2-1/2" = 0.24 3-1/2" = 0.50 6" = 1.46

Filename: J:\Support\Library\FIELD AND LAB FORMS\AutoCAD\_Lab Water Sampling Log.dwg Date: 02-10-2011 Login: sac

OWNER / LOCATION: Sound Transit / Federal Way Transit Center DATE: 6/27/2022  
 WELL NO: FL358-MW10 SAMPLE NO: FL358-MW10-220627 ECOLOGY TAG NO: BNL55B DUPLICATE NO: —  
 WEATHER: Sunny, High 80s MS / MSD? Yes  No   
 WELL SITE CONDITIONS / MP DEFINITION: North Top of casing  
 (MP is typically the north PVC rim)

SAMPLING DATA

TIME STARTED: 1145 LNAPL THICKNESS: — ft. Sample   
 PID HEAD SPACE: Ø ppm DNAPL THICKNESS: — ft. Sample   
 MP DISTANCE ABOVE / BELOW GROUND SURFACE: — ft.  
 TOTAL DEPTH OF WELL BELOW MP: 38 ft.  
 DTW BELOW MP: 11.97 ft.  
 WATER COLUMN IN WELL: 26.03 ft.  
 CASING DIAMETER: 2 in.  
 GALLONS PER FOOT: 0.16  
 GALLONS IN WELL: 4.17 x3 = 12.5  
 TIME PURGING STARTED: 1149

SAMPLE CONTAINERS			
Number	Size	Type	Pres.
5	40ml	VOA	HCl
1	250ml	poly	H <sub>2</sub> SO <sub>4</sub>
1	250ml	poly	HCl
1	1L	poly	HCl
1	250ml	amber	HCl
1	250ml	poly	HNO <sub>3</sub>

FIELD PARAMETERS

GALLONS REMOVED	TEMP. (C°)	<sup>ORP</sup> mV	pH	COND. (µmhos/cm)	D.O. (mg/L)	TURBIDITY (NTU)	SALINITY (ppt)	TDS (g/L)	COLOR	TIME	JUN
Initial	15.2	7.4	6.18	540.5	0.86	78.7	0.27	0.3575	lt grey	1151	11.95
0.5	14.9	16.0	6.06	544.2	0.47	14.8	0.26	0.3536	clear	1155	11.97
1.0	14.9	18.7	6.05	543.1	0.42	31.0	0.26	0.3529	clear	1159	11.99
1.5	14.9	20.1	6.05	542.5	0.39	29.8	0.26	0.3529	clear	1202	12.00
2.0	14.8	20.1	6.06	543.4	0.36	20.2	0.26	0.3523	clear	1206	12.00
2.5	14.9	19.2	6.07	543.2	0.33	39.2	0.26	0.3529	clear	1210	12.01
3.0	14.9	17.0	6.09	542.8	0.31	39.9	0.26	0.3529	clear	1214	12.06
3.5	14.9	14.0	6.12	542.8	0.29	11.9	0.26	0.3529	clear	1218	12.02
4.0	14.9	13.4	6.13	542.5	0.28	12.1	0.26	0.3529	clear	1222	12.02
After Sampling											

EVACUATION METHOD: Bladder Pump  
 PUMP INTAKE DEPTH (if applicable): Mid-screen  
 PURGE WATER DISPOSITION (e.g., drum #): Drum on-site  
 WATER QUALITY (e.g., sheen, odor): light grey to clear. No sheen or odor  
 WATER QUALITY METER(S) USED; CALIBRATION DATE / TIME: YSE Professional Plus; 6/27/22 1140 am  
 SAMPLING METHOD: EPA / low flow SAMPLE TIME: 1230  
 SAMPLING PERSONNEL: MRH / JXS DUPLICATE "TIME": —  
 REMARKS (e.g., recovery rate): Good recovery

TIME COMPLETED: 1245

WELL CASING VOLUMES

Gal / ft 1-1/4" = 0.077 2" = 0.16 3" = 0.37 4" = 0.65  
 1-1/2" = 0.10 2-1/2" = 0.24 3-1/2" = 0.50 6" = 1.46

Filename: J:\Support\Library\FIELD AND LAB FORMS\AutoCAD\_Lab\Water Sampling Log.dwg Date: 02-10-2011 Login: sac

# WATER SAMPLING LOG

OWNER / LOCATION: Sound Transit / Federal Way Transit Center DATE: 6/27/2022  
 WELL NO: FL358-MW11 SAMPLE NO: FL358-MW11-220627 ECOLOGY TAG NO: BNL559 DUPLICATE NO: \_\_\_\_\_  
 WEATHER: Sunny, low 90s MS / MSD? Yes  No   
 WELL SITE CONDITIONS / MP DEFINITION: North TOU  
 (MP is typically the north PVC rim)

### SAMPLING DATA

TIME STARTED: 1330 LNAPL THICKNESS: \_\_\_\_\_ ft. Sample   
 PID HEAD SPACE: 0.2 ppm DNAPL THICKNESS: \_\_\_\_\_ ft. Sample   
 MP DISTANCE ABOVE / BELOW GROUND SURFACE: \_\_\_\_\_ ft.  
 TOTAL DEPTH OF WELL BELOW MP: 35 ft.  
 DTW BELOW MP: 11.89 ft.  
 WATER COLUMN IN WELL: 23.11 ft.  
 CASING DIAMETER: 2 in.  
 GALLONS PER FOOT: 0.16  
 GALLONS IN WELL: 3.70 x3 = 11.1  
 TIME PURGING STARTED: 14:52

SAMPLE CONTAINERS			
Number	Size	Type	Pres.

ORP

### FIELD PARAMETERS

GALLONS REMOVED	TEMP. (C°)	ORP (mV)	pH	COND. (µmhos/cm)	D.O. (mg/L)	TURBIDITY (NTU)	SALINITY (%)	TDS (g/L)	COLOR	TIME
Initial					<u>2.10</u>	<u>61.8</u>			<u>sl gray</u>	<u>1401</u>
<u>0.5</u>	<u>15.2</u>	<u>9.4</u>	<u>6.11</u>	<u>670</u>	<u>1.66</u>	<u>112</u>	<u>0.33</u>	<u>0.435</u>		<u>1406</u>
<u>1.0</u>	<u>16.1</u>	<u>6.4</u>	<u>6.07</u>	<u>667</u>	<u>0.96</u>	<u>80.6</u>	<u>0.33</u>	<u>0.4290</u>	<u>sl gray</u>	<u>1411</u>
<u>1.5</u>	<u>15.0</u>	<u>0.6</u>	<u>6.11</u>	<u>661</u>	<u>0.37</u>	<u>55.2</u>	<u>0.32</u>	<u>0.4290</u>	<u>" "</u>	<u>1414</u>
<u>2.0</u>	<u>14.8</u>	<u>2.2</u>	<u>6.11</u>	<u>668</u>	<u>0.37</u>	<u>29.8</u>	<u>0.32</u>	<u>0.4290</u>	<u>" "</u>	<u>1417</u>
<u>2.5</u>	<u>14.9</u>	<u>3.9</u>	<u>6.12</u>	<u>657</u>	<u>0.35</u>	<u>13.6</u>	<u>0.32</u>	<u>0.4290</u>	<u>" "</u>	<u>1420</u>
<u>3.0</u>	<u>14.7</u>	<u>5.7</u>	<u>6.12</u>	<u>656</u>	<u>0.32</u>	<u>15.5</u>	<u>0.32</u>	<u>0.4290</u>	<u>" "</u>	<u>1423</u>
<u>3.5</u>	<u>14.7</u>	<u>5.5</u>	<u>6.12</u>	<u>657</u>	<u>0.29</u>	<u>13.5</u>	<u>0.32</u>	<u>0.4290</u>	<u>" "</u>	<u>1426</u>
<u>4.0</u>	<u>14.9</u>	<u>5.6</u>	<u>6.11</u>	<u>658</u>	<u>0.26</u>	<u>16.2</u>	<u>0.32</u>	<u>0.4290</u>	<u>" "</u>	<u>1429</u>
After Sampling										

DTW

EVACUATION METHOD: Bladder Pump  
 PUMP INTAKE DEPTH (if applicable): Mid screen  
 PURGE WATER DISPOSITION (e.g., drum #): Drum on site  
 WATER QUALITY (e.g., sheen, odor): No sheen or odor  
 WATER QUALITY METER(S) USED; CALIBRATION DATE / TIME: YSI Professional Plus; 6/27/22 1140am  
 SAMPLING METHOD: EPA low flow SAMPLE TIME: 1435  
 SAMPLING PERSONNEL: JXS DUPLICATE "TIME": \_\_\_\_\_  
 REMARKS (e.g., recovery rate): \_\_\_\_\_

TIME COMPLETED: 1520

### WELL CASING VOLUMES

Gal / ft 1-1/4" = 0.077 2" = 0.16 3" = 0.37 4" = 0.65  
 1-1/2" = 0.10 2-1/2" = 0.24 3-1/2" = 0.50 6" = 1.46

OWNER / LOCATION: Sound Transit  
 DATE: 6/29/2022  
 WELL NO: FL358-UW-12 SAMPLE NO: FL358-UW12-220629 ECOLOGY TAG NO: BNL 565 DUPLICATE NO:       
 WEATHER: Cloudy, High 60s MS / MSD? Yes  No   
 WELL SITE CONDITIONS / MP DEFINITION: Norm TOC  
 (MP is typically the north PVC rim)

SAMPLING DATA

TIME STARTED: 1430 LNAPL THICKNESS:      ft. Sample   
 PID HEAD SPACE:      ppm DNAPL THICKNESS:      ft. Sample   
 MP DISTANCE ABOVE / BELOW GROUND SURFACE:      ft.  
 TOTAL DEPTH OF WELL BELOW MP: 39.0 ft. Number Size Type Pres.  
 DTW BELOW MP: 12.40 ft.  
 WATER COLUMN IN WELL: 25.52 ft.  
 CASING DIAMETER: 2 in.  
 GALLONS PER FOOT: 0.16  
 GALLONS IN WELL: 4.08  
 TIME PURGING STARTED: 1444

FIELD PARAMETERS

GALLONS REMOVED	TEMP. (C°)	pH	COND. (µmhos/cm)	D.O. (mg/L)	TURBIDITY (NTU)	SALINITY (%)	TDS (g/L)	COLOR	TIME	PTW
Initial	15.87	7.53	492	3.30	49.2	0.24	0.320	clear	1440	12.65
0.5	13.99	7.53	490	1.01	34.3	0.24	0.318	clear	1450	13.00
1.0	13.84	7.54	491	0.60	17.0	0.24	0.319	clear	1454	
1.5	13.74	7.54	492	0.47	7.70	0.24	0.320	clear	1458	
2.0	13.74	7.53	492	0.41	5.94	0.24	0.320	clear	1502	13.10
2.5	13.73	7.54	492	0.38	4.23	0.24	0.320	clear	1506	
3.0	13.72	7.53	493	0.37	5.00	0.24	0.321	clear	1510	13.10
After Sampling										

EVACUATION METHOD: Bladder Pump  
 PUMP INTAKE DEPTH (if applicable): Mid Screen  
 PURGE WATER DISPOSITION (e.g., drum #): Drum on site  
 WATER QUALITY (e.g., sheen, odor): No sheen or odor  
 WATER QUALITY METER(S) USED; CALIBRATION DATE / TIME: VSI 550 - 6/29/22 0930  
 SAMPLING METHOD: EPA Low Flow SAMPLE TIME: 1515  
 SAMPLING PERSONNEL: MKH & JXS DUPLICATE TIME:       
 REMARKS (e.g., recovery rate):     

TIME COMPLETED: 1535

WELL CASING VOLUMES  
 Gal/ft 1-1/4" = 0.077 2" = 0.16 3" = 0.37 4" = 0.65  
 1-1/2" = 0.10 2-1/2" = 0.24 3-1/2" = 0.50 6" = 1.46

Filename: J:\Support\Library\FIELD AND LAB FORMS\AutoCAD\Water Sampling Log.dwg Date: 02-10-2011 Login: sac



OWNER / LOCATION: Sound Transit / Federal Way Transit Center DATE: 6/29/22  
 WELL NO: FL358-MW14 SAMPLE NO: FL358-MW14-220629 ECOLOGY TAG NO: BNL561 DUPLICATE NO: \_\_\_\_\_  
 WEATHER: cloudy, high 50s MS / MSD? Yes  No   
 WELL SITE CONDITIONS / MP DEFINITION: North TOC  
 (MP is typically the north PVC rim)

SAMPLING DATA

TIME STARTED: 1150 LNAPL THICKNESS: \_\_\_\_\_ ft. Sample   
 PID HEAD SPACE: 0.5 ppm DNAPL THICKNESS: \_\_\_\_\_ ft. Sample   
 MP DISTANCE ABOVE / BELOW GROUND SURFACE: \_\_\_\_\_ ft.  
 TOTAL DEPTH OF WELL BELOW MP: 39 ft.  
 DTW BELOW MP: 12.32 ft.  
 WATER COLUMN IN WELL: 26.60 ft.  
 CASING DIAMETER: 2 in.  
 GALLONS PER FOOT: 0.10  
 GALLONS IN WELL: 4.27  
 TIME PURGING STARTED: 1159

SAMPLE CONTAINERS			
Number	Size	Type	Pres.

FIELD PARAMETERS

GALLONS REMOVED	TEMP. (C°)	ORP (mV)	pH	COND. (µmhos/cm)	D.O. (mg/L)	TURBIDITY (NTU)	SALINITY (%)	TDS (g/L)	COLOR	TIME	DTW
Initial	14.36	35.1	7.20	499	2.33	50.2	0.24	0.323	clear	1202	13.55
0.5	14.21	40.4	7.30	495	0.78	40.6	0.24	0.322	clear	1206	
1.0	14.24	31.0	7.36	508	0.49	23.4	0.25	0.331	clear	1210	13.72
1.5	14.33	24.6	7.38	515	0.39	20.0	0.25	0.335	clear	1214	
2.0	14.59	7.3	7.42	537	0.30	12.2	0.26	0.349	clear	1218	13.80
2.5	14.59	2.0	7.43	539	0.26	11.0	0.26	0.350	clear	1222	
3.0	14.61	-0.3	7.44	540	0.25	11.1	0.26	0.351	clear	1226	13.82
3.5	14.59	-0.6	7.44	542	0.25	8.84	0.26	0.352	clear	1230	
After Sampling											

EVACUATION METHOD: Bladder pump  
 PUMP INTAKE DEPTH (if applicable): Mid Screen  
 PURGE WATER DISPOSITION (e.g., drum #): Drum on site  
 WATER QUALITY (e.g., sheen, odor): \_\_\_\_\_  
 WATER QUALITY METER(S) USED; CALIBRATION DATE / TIME: YSI 556 - 6/29/22 0930  
 SAMPLING METHOD: EPA Low Flow SAMPLE TIME: 1240  
 SAMPLING PERSONNEL: MKH & JXS DUPLICATE "TIME": \_\_\_\_\_  
 REMARKS (e.g., recovery rate): \_\_\_\_\_

TIME COMPLETED: 1255

WELL CASING VOLUMES

Gal / ft 1-1/4" = 0.077 2" = 0.16 3" = 0.37 4" = 0.65  
 1-1/2" = 0.10 2-1/2" = 0.24 3-1/2" = 0.50 6" = 1.46

Filename: J:\Support\library\FIELD AND LAB FORMS\AutoCAD\Water Sampling Log.dwg Date: 02-10-2011 Login: sac

## Appendix D

## Laboratory Reports

## CONTENTS

- Analytical Report, OnSite Environmental, Laboratory Job ID 2206-157R(14 pages)
- Analytical Report, OnSite Environmental, Laboratory Job ID 2206-169 (11 pages)
- Analytical Report, OnSite Environmental, Laboratory Job ID 2206-239 (11 pages)
- Analytical Report, OnSite Environmental, Laboratory Job ID 2206-240 (11 pages)
- Analytical Report, OnSite Environmental, Laboratory Job ID 2206-292 (32 pages)
- Analytical Report, OnSite Environmental, Laboratory Job ID 2206-308 (32 pages)
- Analytical Report, OnSite Environmental, Laboratory Job ID 2206-332 (32 pages)
- Analytical Report, OnSite Environmental, Laboratory Job ID 2207-005 (32 pages)
- Analytical Report, OnSite Environmental, Laboratory Job ID 2206-318 (42 pages)
- Analytical Report, OnSite Environmental, Laboratory Job ID 2206-339 (28 pages)
- Analytical Report, AMTEST, Laboratory Job ID 22-A010833 (10 pages)



14648 NE 95<sup>th</sup> Street, Redmond, WA 98052 • (425) 883-3881

June 24, 2022

Joseph Sawdey  
Shannon & Wilson, Inc.  
400 N 34th Street, Suite 100  
Seattle, WA 98103

Re: Analytical Data for Project 105474-050  
Laboratory Reference No. 2206-157

Dear Joseph:

Enclosed are the analytical results and associated quality control data for samples submitted on June 16, 2022.

The standard policy of OnSite Environmental, Inc. is to store your samples for 30 days from the date of receipt. If you require longer storage, please contact the laboratory.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning the data, or need additional information, please feel free to call me.

Sincerely,

A handwritten signature in black ink, appearing to read "DB", with a long horizontal flourish extending to the right.

David Baumeister  
Project Manager

Enclosures



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OnSite Environmental, Inc. 14648 NE 95<sup>th</sup> Street, Redmond, WA 98052 (425) 883-3881

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: June 24, 2022  
Samples Submitted: June 16, 2022  
Laboratory Reference: 2206-157  
Project: 105474-050

### Case Narrative

Samples were collected on June 15, 2022 and received by the laboratory on June 16, 2022. They were maintained at the laboratory at a temperature of 2°C to 6°C.

Please note that any and all soil sample results are reported on a dry-weight basis, unless otherwise noted below.

General QA/QC issues associated with the analytical data enclosed in this laboratory report will be indicated with a reference to a comment or explanation on the Data Qualifier page. More complex and involved QA/QC issues will be discussed in detail below.



Date of Report: June 24, 2022  
 Samples Submitted: June 16, 2022  
 Laboratory Reference: 2206-157  
 Project: 105474-050

### VOLATILE ORGANICS EPA 8260D

Matrix: Soil  
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>FL358-MW14-23-24</b>					
Laboratory ID:	06-157-01					
Vinyl Chloride	ND	0.00092	EPA 8260D	6-22-22	6-22-22	
1,1-Dichloroethene	ND	0.00092	EPA 8260D	6-22-22	6-22-22	
(trans) 1,2-Dichloroethene	ND	0.00092	EPA 8260D	6-22-22	6-22-22	
(cis) 1,2-Dichloroethene	ND	0.00092	EPA 8260D	6-22-22	6-22-22	
Trichloroethene	ND	0.00092	EPA 8260D	6-22-22	6-22-22	
Tetrachloroethene	ND	0.00092	EPA 8260D	6-22-22	6-22-22	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	93	75-130				
<i>Toluene-d8</i>	94	78-128				
<i>4-Bromofluorobenzene</i>	102	71-130				
<b>Client ID:</b>	<b>FL358-MW14-28-29</b>					
Laboratory ID:	06-157-02					
Vinyl Chloride	ND	0.00076	EPA 8260D	6-20-22	6-20-22	
1,1-Dichloroethene	ND	0.00076	EPA 8260D	6-20-22	6-20-22	
(trans) 1,2-Dichloroethene	ND	0.00076	EPA 8260D	6-20-22	6-20-22	
(cis) 1,2-Dichloroethene	ND	0.00076	EPA 8260D	6-20-22	6-20-22	
Trichloroethene	ND	0.00076	EPA 8260D	6-20-22	6-20-22	
Tetrachloroethene	ND	0.00076	EPA 8260D	6-20-22	6-20-22	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	102	75-130				
<i>Toluene-d8</i>	94	78-128				
<i>4-Bromofluorobenzene</i>	101	71-130				
<b>Client ID:</b>	<b>FL358-MW14-33-34</b>					
Laboratory ID:	06-157-03					
Vinyl Chloride	ND	0.00074	EPA 8260D	6-20-22	6-20-22	
1,1-Dichloroethene	ND	0.00074	EPA 8260D	6-20-22	6-20-22	
(trans) 1,2-Dichloroethene	ND	0.00074	EPA 8260D	6-20-22	6-20-22	
(cis) 1,2-Dichloroethene	ND	0.00074	EPA 8260D	6-20-22	6-20-22	
Trichloroethene	ND	0.00074	EPA 8260D	6-20-22	6-20-22	
Tetrachloroethene	ND	0.00074	EPA 8260D	6-20-22	6-20-22	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	105	75-130				
<i>Toluene-d8</i>	95	78-128				
<i>4-Bromofluorobenzene</i>	102	71-130				



Date of Report: June 24, 2022  
 Samples Submitted: June 16, 2022  
 Laboratory Reference: 2206-157  
 Project: 105474-050

### VOLATILE ORGANICS EPA 8260D

Matrix: Soil  
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>FL358-MW14-37-38</b>					
Laboratory ID:	06-157-04					
Vinyl Chloride	ND	0.00098	EPA 8260D	6-20-22	6-20-22	
1,1-Dichloroethene	ND	0.00098	EPA 8260D	6-20-22	6-20-22	
(trans) 1,2-Dichloroethene	ND	0.00098	EPA 8260D	6-20-22	6-20-22	
(cis) 1,2-Dichloroethene	ND	0.00098	EPA 8260D	6-20-22	6-20-22	
Trichloroethene	ND	0.00098	EPA 8260D	6-20-22	6-20-22	
Tetrachloroethene	ND	0.00098	EPA 8260D	6-20-22	6-20-22	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>107</i>	<i>75-130</i>				
<i>Toluene-d8</i>	<i>89</i>	<i>78-128</i>				
<i>4-Bromofluorobenzene</i>	<i>100</i>	<i>71-130</i>				
<b>Client ID:</b>	<b>FL358-MW14-38.5-39.5</b>					
Laboratory ID:	06-157-05					
Vinyl Chloride	ND	0.00086	EPA 8260D	6-20-22	6-20-22	
1,1-Dichloroethene	ND	0.00086	EPA 8260D	6-20-22	6-20-22	
(trans) 1,2-Dichloroethene	ND	0.00086	EPA 8260D	6-20-22	6-20-22	
(cis) 1,2-Dichloroethene	ND	0.00086	EPA 8260D	6-20-22	6-20-22	
Trichloroethene	ND	0.00086	EPA 8260D	6-20-22	6-20-22	
Tetrachloroethene	ND	0.00086	EPA 8260D	6-20-22	6-20-22	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>105</i>	<i>75-130</i>				
<i>Toluene-d8</i>	<i>94</i>	<i>78-128</i>				
<i>4-Bromofluorobenzene</i>	<i>102</i>	<i>71-130</i>				
<b>Client ID:</b>	<b>FL358-MW8-22-23</b>					
Laboratory ID:	06-157-06					
Vinyl Chloride	ND	0.00086	EPA 8260D	6-20-22	6-20-22	
1,1-Dichloroethene	ND	0.00086	EPA 8260D	6-20-22	6-20-22	
(trans) 1,2-Dichloroethene	ND	0.00086	EPA 8260D	6-20-22	6-20-22	
(cis) 1,2-Dichloroethene	ND	0.00086	EPA 8260D	6-20-22	6-20-22	
Trichloroethene	ND	0.00086	EPA 8260D	6-20-22	6-20-22	
Tetrachloroethene	0.0018	0.00086	EPA 8260D	6-20-22	6-20-22	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>104</i>	<i>75-130</i>				
<i>Toluene-d8</i>	<i>108</i>	<i>78-128</i>				
<i>4-Bromofluorobenzene</i>	<i>97</i>	<i>71-130</i>				



Date of Report: June 24, 2022  
 Samples Submitted: June 16, 2022  
 Laboratory Reference: 2206-157  
 Project: 105474-050

### VOLATILE ORGANICS EPA 8260D

Matrix: Soil  
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>FL358-MW8-27-28</b>					
Laboratory ID:	06-157-07					
Vinyl Chloride	ND	0.00088	EPA 8260D	6-20-22	6-20-22	
1,1-Dichloroethene	ND	0.00088	EPA 8260D	6-20-22	6-20-22	
(trans) 1,2-Dichloroethene	ND	0.00088	EPA 8260D	6-20-22	6-20-22	
(cis) 1,2-Dichloroethene	ND	0.00088	EPA 8260D	6-20-22	6-20-22	
Trichloroethene	ND	0.00088	EPA 8260D	6-20-22	6-20-22	
Tetrachloroethene	ND	0.00088	EPA 8260D	6-20-22	6-20-22	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	105	75-130				
<i>Toluene-d8</i>	96	78-128				
<i>4-Bromofluorobenzene</i>	100	71-130				
<b>Client ID:</b>	<b>FL358-MW8-32-33</b>					
Laboratory ID:	06-157-08					
Vinyl Chloride	ND	0.00088	EPA 8260D	6-20-22	6-20-22	
1,1-Dichloroethene	ND	0.00088	EPA 8260D	6-20-22	6-20-22	
(trans) 1,2-Dichloroethene	ND	0.00088	EPA 8260D	6-20-22	6-20-22	
(cis) 1,2-Dichloroethene	ND	0.00088	EPA 8260D	6-20-22	6-20-22	
Trichloroethene	ND	0.00088	EPA 8260D	6-20-22	6-20-22	
Tetrachloroethene	ND	0.00088	EPA 8260D	6-20-22	6-20-22	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	105	75-130				
<i>Toluene-d8</i>	98	78-128				
<i>4-Bromofluorobenzene</i>	99	71-130				
<b>Client ID:</b>	<b>FL358-MW8-36-37</b>					
Laboratory ID:	06-157-11					
Vinyl Chloride	ND	0.00086	EPA 8260D	6-20-22	6-20-22	
1,1-Dichloroethene	ND	0.00086	EPA 8260D	6-20-22	6-20-22	
(trans) 1,2-Dichloroethene	ND	0.00086	EPA 8260D	6-20-22	6-20-22	
(cis) 1,2-Dichloroethene	ND	0.00086	EPA 8260D	6-20-22	6-20-22	
Trichloroethene	ND	0.00086	EPA 8260D	6-20-22	6-20-22	
Tetrachloroethene	ND	0.00086	EPA 8260D	6-20-22	6-20-22	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	108	75-130				
<i>Toluene-d8</i>	101	78-128				
<i>4-Bromofluorobenzene</i>	96	71-130				



Date of Report: June 24, 2022  
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 Laboratory Reference: 2206-157  
 Project: 105474-050

### VOLATILE ORGANICS EPA 8260D

Matrix: Soil  
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>FL358-MW8-37-38</b>					
Laboratory ID:	06-157-12					
Vinyl Chloride	ND	0.00086	EPA 8260D	6-20-22	6-20-22	
1,1-Dichloroethene	ND	0.00086	EPA 8260D	6-20-22	6-20-22	
(trans) 1,2-Dichloroethene	ND	0.00086	EPA 8260D	6-20-22	6-20-22	
(cis) 1,2-Dichloroethene	ND	0.00086	EPA 8260D	6-20-22	6-20-22	
Trichloroethene	ND	0.00086	EPA 8260D	6-20-22	6-20-22	
Tetrachloroethene	ND	0.00086	EPA 8260D	6-20-22	6-20-22	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	97	75-130				
<i>Toluene-d8</i>	93	78-128				
<i>4-Bromofluorobenzene</i>	95	71-130				



Date of Report: June 24, 2022  
 Samples Submitted: June 16, 2022  
 Laboratory Reference: 2206-157  
 Project: 105474-050

**VOLATILE ORGANICS EPA 8260D  
 QUALITY CONTROL**

Matrix: Soil  
 Units: mg/kg

<b>Analyte</b>	<b>Result</b>	<b>PQL</b>	<b>Method</b>	<b>Date Prepared</b>	<b>Date Analyzed</b>	<b>Flags</b>
<b>METHOD BLANK</b>						
Laboratory ID:	MB0620S2					
Vinyl Chloride	ND	0.0010	EPA 8260D	6-20-22	6-20-22	
1,1-Dichloroethene	ND	0.0010	EPA 8260D	6-20-22	6-20-22	
(trans) 1,2-Dichloroethene	ND	0.0010	EPA 8260D	6-20-22	6-20-22	
(cis) 1,2-Dichloroethene	ND	0.0010	EPA 8260D	6-20-22	6-20-22	
Trichloroethene	ND	0.0010	EPA 8260D	6-20-22	6-20-22	
Tetrachloroethene	ND	0.0010	EPA 8260D	6-20-22	6-20-22	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>100</i>	<i>75-130</i>				
<i>Toluene-d8</i>	<i>98</i>	<i>78-128</i>				
<i>4-Bromofluorobenzene</i>	<i>99</i>	<i>71-130</i>				
Laboratory ID:	MB0622S1					
Vinyl Chloride	ND	0.0010	EPA 8260D	6-22-22	6-22-22	
1,1-Dichloroethene	ND	0.0010	EPA 8260D	6-22-22	6-22-22	
(trans) 1,2-Dichloroethene	ND	0.0010	EPA 8260D	6-22-22	6-22-22	
(cis) 1,2-Dichloroethene	ND	0.0010	EPA 8260D	6-22-22	6-22-22	
Trichloroethene	ND	0.0010	EPA 8260D	6-22-22	6-22-22	
Tetrachloroethene	ND	0.0010	EPA 8260D	6-22-22	6-22-22	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>95</i>	<i>75-130</i>				
<i>Toluene-d8</i>	<i>94</i>	<i>78-128</i>				
<i>4-Bromofluorobenzene</i>	<i>102</i>	<i>71-130</i>				



Date of Report: June 24, 2022  
 Samples Submitted: June 16, 2022  
 Laboratory Reference: 2206-157  
 Project: 105474-050

**VOLATILE ORGANICS EPA 8260D  
 QUALITY CONTROL**

Matrix: Soil  
 Units: mg/kg

Analyte	Result		Spike Level		Source	Percent	Recovery	RPD		Flags
					Result	Recovery	Limits	RPD	Limit	
<b>MATRIX SPIKES</b>										
Laboratory ID:	06-157-12									
	MS	MSD	MS	MSD		MS	MSD			
1,1-Dichloroethene	<b>0.0375</b>	<b>0.0364</b>	0.0500	0.0500	ND	75	73	65-131	3	25
Benzene	<b>0.0399</b>	<b>0.0382</b>	0.0500	0.0500	ND	80	76	67-131	4	28
Trichloroethene	<b>0.0418</b>	<b>0.0413</b>	0.0500	0.0500	ND	84	83	61-124	1	24
Toluene	<b>0.0395</b>	<b>0.0409</b>	0.0500	0.0500	ND	79	82	66-128	3	26
Chlorobenzene	<b>0.0377</b>	<b>0.0357</b>	0.0500	0.0500	ND	75	71	56-117	5	31
<i>Surrogate:</i>										
Dibromofluoromethane						99	101	75-130		
Toluene-d8						96	102	78-128		
4-Bromofluorobenzene						101	99	71-130		
<b>SPIKE BLANKS</b>										
Laboratory ID:	SB0622S1									
	SB	SBD	SB	SBD		SB	SBD			
1,1-Dichloroethene	<b>0.0459</b>	<b>0.0452</b>	0.0500	0.0500		92	90	75-129	2	19
Benzene	<b>0.0458</b>	<b>0.0462</b>	0.0500	0.0500		92	92	80-122	1	18
Trichloroethene	<b>0.0487</b>	<b>0.0483</b>	0.0500	0.0500		97	97	80-129	1	18
Toluene	<b>0.0472</b>	<b>0.0478</b>	0.0500	0.0500		94	96	80-120	1	18
Chlorobenzene	<b>0.0467</b>	<b>0.0471</b>	0.0500	0.0500		93	94	80-120	1	18
<i>Surrogate:</i>										
Dibromofluoromethane						93	92	75-130		
Toluene-d8						95	94	78-128		
4-Bromofluorobenzene						102	103	71-130		



Date of Report: June 24, 2022  
 Samples Submitted: June 16, 2022  
 Laboratory Reference: 2206-157  
 Project: 105474-050

### VOLATILE ORGANICS EPA 8260D

Matrix: Water  
 Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>Rinsate-220615</b>					
Laboratory ID:	06-157-09					
Vinyl Chloride	ND	0.20	EPA 8260D	6-17-22	6-17-22	
1,1-Dichloroethene	ND	0.20	EPA 8260D	6-17-22	6-17-22	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260D	6-17-22	6-17-22	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260D	6-17-22	6-17-22	
Trichloroethene	ND	0.20	EPA 8260D	6-17-22	6-17-22	
Tetrachloroethene	ND	0.20	EPA 8260D	6-17-22	6-17-22	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>102</i>	<i>75-127</i>				
<i>Toluene-d8</i>	<i>101</i>	<i>80-127</i>				
<i>4-Bromofluorobenzene</i>	<i>94</i>	<i>78-125</i>				

<b>Client ID:</b>	<b>TB-220615</b>					
Laboratory ID:	06-157-10					
Vinyl Chloride	ND	0.20	EPA 8260D	6-17-22	6-17-22	
1,1-Dichloroethene	ND	0.20	EPA 8260D	6-17-22	6-17-22	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260D	6-17-22	6-17-22	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260D	6-17-22	6-17-22	
Trichloroethene	ND	0.20	EPA 8260D	6-17-22	6-17-22	
Tetrachloroethene	ND	0.20	EPA 8260D	6-17-22	6-17-22	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>101</i>	<i>75-127</i>				
<i>Toluene-d8</i>	<i>100</i>	<i>80-127</i>				
<i>4-Bromofluorobenzene</i>	<i>93</i>	<i>78-125</i>				



Date of Report: June 24, 2022  
 Samples Submitted: June 16, 2022  
 Laboratory Reference: 2206-157  
 Project: 105474-050

**VOLATILE ORGANICS EPA 8260D  
 QUALITY CONTROL**

Matrix: Water  
 Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>METHOD BLANK</b>						
Laboratory ID:	MB0617W1					
Vinyl Chloride	ND	0.20	EPA 8260D	6-17-22	6-17-22	
1,1-Dichloroethene	ND	0.20	EPA 8260D	6-17-22	6-17-22	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260D	6-17-22	6-17-22	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260D	6-17-22	6-17-22	
Trichloroethene	ND	0.20	EPA 8260D	6-17-22	6-17-22	
Tetrachloroethene	ND	0.20	EPA 8260D	6-17-22	6-17-22	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	101	75-127				
<i>Toluene-d8</i>	102	80-127				
<i>4-Bromofluorobenzene</i>	96	78-125				

Analyte	Result		Spike Level		Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
<b>SPIKE BLANKS</b>										
Laboratory ID:	SB0617W1									
	SB	SBD	SB	SBD	SB	SBD				
1,1-Dichloroethene	10.9	11.2	10.0	10.0	109	112	78-125	3	19	
Benzene	10.6	10.8	10.0	10.0	106	108	80-121	2	16	
Trichloroethene	11.3	11.4	10.0	10.0	113	114	80-122	1	18	
Toluene	10.4	10.6	10.0	10.0	104	106	80-120	2	18	
Chlorobenzene	10.6	10.6	10.0	10.0	106	106	80-120	0	17	
<i>Surrogate:</i>										
<i>Dibromofluoromethane</i>					94	98	75-127			
<i>Toluene-d8</i>					102	102	80-127			
<i>4-Bromofluorobenzene</i>					104	102	78-125			



Date of Report: June 24, 2022  
Samples Submitted: June 16, 2022  
Laboratory Reference: 2206-157  
Project: 105474-050

**% MOISTURE**

<b>Client ID</b>	<b>Lab ID</b>	<b>% Moisture</b>	<b>Date Analyzed</b>
FL358-MW14-23-24	06-157-01	8	6-17-22
FL358-MW14-28-29	06-157-02	7	6-17-22
FL358-MW14-33-34	06-157-03	10	6-17-22
FL358-MW14-37-38	06-157-04	9	6-17-22
FL358-MW14-38.5-39.5	06-157-05	9	6-17-22
FL358-MW8-22-23	06-157-06	16	6-17-22
FL358-MW8-27-28	06-157-07	14	6-17-22
FL358-MW8-32-33	06-157-08	8	6-17-22
FL358-MW8-36-37	06-157-11	6	6-17-22
FL358-MW8-37-38	06-157-12	6	6-17-22





### Data Qualifiers and Abbreviations

- A - Due to a high sample concentration, the amount spiked is insufficient for meaningful MS/MSD recovery data.
  - B - The analyte indicated was also found in the blank sample.
  - C - The duplicate RPD is outside control limits due to high result variability when analyte concentrations are within five times the quantitation limit.
  - E - The value reported exceeds the quantitation range and is an estimate.
  - F - Surrogate recovery data is not available due to the high concentration of coeluting target compounds.
  - H - The analyte indicated is a common laboratory solvent and may have been introduced during sample preparation, and be impacting the sample result.
  - I - Compound recovery is outside of the control limits.
  - J - The value reported was below the practical quantitation limit. The value is an estimate.
  - K - Sample duplicate RPD is outside control limits due to sample inhomogeneity. The sample was re-extracted and re-analyzed with similar results.
  - L - The RPD is outside of the control limits.
  - M - Hydrocarbons in the gasoline range are impacting the diesel range result.
  - M1 - Hydrocarbons in the gasoline range (toluene-naphthalene) are present in the sample.
  - N - Hydrocarbons in the lube oil range are impacting the diesel range result.
  - N1 - Hydrocarbons in diesel range are impacting lube oil range results.
  - O - Hydrocarbons indicative of heavier fuels are present in the sample and are impacting the gasoline result.
  - P - The RPD of the detected concentrations between the two columns is greater than 40.
  - Q - Surrogate recovery is outside of the control limits.
  - S - Surrogate recovery data is not available due to the necessary dilution of the sample.
  - T - The sample chromatogram is not similar to a typical \_\_\_\_\_.
  - U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.
  - U1 - The practical quantitation limit is elevated due to interferences present in the sample.
  - V - Matrix Spike/Matrix Spike Duplicate recoveries are outside control limits due to matrix effects.
  - W - Matrix Spike/Matrix Spike Duplicate RPD are outside control limits due to matrix effects.
  - X - Sample extract treated with a mercury cleanup procedure.
  - X1 - Sample extract treated with a sulfuric acid/silica gel cleanup procedure.
  - X2 - Sample extract treated with a silica gel cleanup procedure.
  - Y - The calibration verification for this analyte exceeded the 20% drift specified in methods 8260 & 8270, and therefore the reported result should be considered an estimate. The overall performance of the calibration verification standard met the acceptance criteria of the method.
  - Y1 - Negative effects of the matrix from this sample on the instrument caused values for this analyte in the bracketing continuing calibration verification standard (CCVs) to be outside of 20% acceptance criteria. Because of this, quantitation limits and sample concentrations should be considered estimates.
  - Z -
- ND - Not Detected at PQL  
 PQL - Practical Quantitation Limit  
 RPD - Relative Percent Difference



# Chain of Custody

Company: Shannon & Wilson  
 Project Number: 101637-125 <sup>WB</sup> 105474-050  
 Project Name: FL358 Monitoring Wells  
 Project Manager: Joe Sawden  
 Sampled by: " "

**Turnaround Request (in working days)**  
 (Check One)  
 Same Day     1 Day  
 2 Days     3 Days  
 Standard (7 Days)  
 \_\_\_\_\_ (other)

Laboratory Number: **06-157**

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers
1	FL358-MW14-23-24	6/15	10:25	Soil	4
2	FL358-MW14-28-29	↓	10:35	↓	↓
3	FL358-MW14-33-34		11:30		
4	FL358-MW14-37-38		12:00		
5	FL358-MW14-38.5-39.5		12:10		
6	FL358-MW8-22-23		16:30		
7	FL358-MW8-27-28		16:35		
8	FL358-MW8-32-33		17:00		
9	Rinsate-220615		↓		
10	<del>Waste</del> TB-220615	-	-	Water	1

NWTPH-HCID	NWTPH-Gx/BTEX (8021 <input type="checkbox"/> 8260 <input type="checkbox"/> )	NWTPH-Gx	NWTPH-Dx (Acid / SG Clean-up <input type="checkbox"/> )	Volatiles 8260	Halogenated Volatiles 8260 <u>Low Level</u>	EDB EPA 8011 (Waters Only)	Semivolatiles 8270/SIM (with low-level PAHs)	PAHs 8270/SIM (low-level)	PCBs 8082	Organochlorine Pesticides 8081	Organophosphorus Pesticides 8270/SIM	Chlorinated Acid Herbicides 8151	Total FCRA Metals	Total MTCA Metals	TCLP Metals	HEM (oil and grease) 1664	% Moisture
					<input checked="" type="checkbox"/>												<input checked="" type="checkbox"/>

Signature	Company	Date	Time	Comments/Special Instructions
<u>[Signature]</u>	SWI	6/16	10:52	Analyte List: PCE, TCE, cis- and trans-1,2-PCE, 1,1-DCE, and VC. Target Reporting Limit = 0.001 mg/kg (1 P.P.b)
<u>[Signature]</u>	Alpha Courier	6/16/22	10:52	
<u>[Signature]</u>	Alpha	6/16	1:05	
<u>[Signature]</u>	OSE	6/16/22	1305	
Reviewed/Date	Reviewed/Date	Data Package: Standard <input checked="" type="checkbox"/> Level III <input type="checkbox"/> Level IV <input type="checkbox"/>		
		Chromatograms with final report <input type="checkbox"/> Electronic Data Deliverables (EDDs) <input checked="" type="checkbox"/>		





14648 NE 95<sup>th</sup> Street, Redmond, WA 98052 • (425) 883-3881

June 24, 2022

Joseph Sawdey  
Shannon & Wilson, Inc.  
400 N 34th Street, Suite 100  
Seattle, WA 98103

Re: Analytical Data for Project 105474-050  
Laboratory Reference No. 2206-169

Dear Joseph:

Enclosed are the analytical results and associated quality control data for samples submitted on June 17, 2022.

The standard policy of OnSite Environmental, Inc. is to store your samples for 30 days from the date of receipt. If you require longer storage, please contact the laboratory.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning the data, or need additional information, please feel free to call me.

Sincerely,

A handwritten signature in black ink, appearing to read "DB", with a long horizontal flourish extending to the right.

David Baumeister  
Project Manager

Enclosures



---

OnSite Environmental, Inc. 14648 NE 95<sup>th</sup> Street, Redmond, WA 98052 (425) 883-3881

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: June 24, 2022  
Samples Submitted: June 17, 2022  
Laboratory Reference: 2206-169  
Project: 105474-050

### Case Narrative

Samples were collected on June 16, 2022 and received by the laboratory on June 17, 2022. They were maintained at the laboratory at a temperature of 2°C to 6°C.

Please note that any and all soil sample results are reported on a dry-weight basis, unless otherwise noted below.

General QA/QC issues associated with the analytical data enclosed in this laboratory report will be indicated with a reference to a comment or explanation on the Data Qualifier page. More complex and involved QA/QC issues will be discussed in detail below.



Date of Report: June 24, 2022  
 Samples Submitted: June 17, 2022  
 Laboratory Reference: 2206-169  
 Project: 105474-050

### VOLATILE ORGANICS EPA 8260D

Matrix: Soil  
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID: FL358-MW9-22-23</b>						
Laboratory ID: 06-169-01						
Vinyl Chloride	ND	0.00078	EPA 8260D	6-20-22	6-20-22	
1,1-Dichloroethene	ND	0.00078	EPA 8260D	6-20-22	6-20-22	
(trans) 1,2-Dichloroethene	ND	0.00078	EPA 8260D	6-20-22	6-20-22	
(cis) 1,2-Dichloroethene	ND	0.00078	EPA 8260D	6-20-22	6-20-22	
Trichloroethene	ND	0.00078	EPA 8260D	6-20-22	6-20-22	
Tetrachloroethene	ND	0.00078	EPA 8260D	6-20-22	6-20-22	
<i>Surrogate: Percent Recovery Control Limits</i>						
<i>Dibromofluoromethane</i>	<i>103</i>	<i>75-130</i>				
<i>Toluene-d8</i>	<i>94</i>	<i>78-128</i>				
<i>4-Bromofluorobenzene</i>	<i>99</i>	<i>71-130</i>				
<b>Client ID: FL358-MW9-27-28</b>						
Laboratory ID: 06-169-02						
Vinyl Chloride	ND	0.00084	EPA 8260D	6-20-22	6-20-22	
1,1-Dichloroethene	ND	0.00084	EPA 8260D	6-20-22	6-20-22	
(trans) 1,2-Dichloroethene	ND	0.00084	EPA 8260D	6-20-22	6-20-22	
(cis) 1,2-Dichloroethene	ND	0.00084	EPA 8260D	6-20-22	6-20-22	
Trichloroethene	ND	0.00084	EPA 8260D	6-20-22	6-20-22	
Tetrachloroethene	ND	0.00084	EPA 8260D	6-20-22	6-20-22	
<i>Surrogate: Percent Recovery Control Limits</i>						
<i>Dibromofluoromethane</i>	<i>103</i>	<i>75-130</i>				
<i>Toluene-d8</i>	<i>98</i>	<i>78-128</i>				
<i>4-Bromofluorobenzene</i>	<i>92</i>	<i>71-130</i>				
<b>Client ID: FL358-MW9-31-32</b>						
Laboratory ID: 06-169-03						
Vinyl Chloride	ND	0.00088	EPA 8260D	6-20-22	6-20-22	
1,1-Dichloroethene	ND	0.00088	EPA 8260D	6-20-22	6-20-22	
(trans) 1,2-Dichloroethene	ND	0.00088	EPA 8260D	6-20-22	6-20-22	
(cis) 1,2-Dichloroethene	0.017	0.00088	EPA 8260D	6-20-22	6-20-22	
Trichloroethene	ND	0.00088	EPA 8260D	6-20-22	6-20-22	
Tetrachloroethene	ND	0.00088	EPA 8260D	6-20-22	6-20-22	
<i>Surrogate: Percent Recovery Control Limits</i>						
<i>Dibromofluoromethane</i>	<i>104</i>	<i>75-130</i>				
<i>Toluene-d8</i>	<i>101</i>	<i>78-128</i>				
<i>4-Bromofluorobenzene</i>	<i>101</i>	<i>71-130</i>				



Date of Report: June 24, 2022  
 Samples Submitted: June 17, 2022  
 Laboratory Reference: 2206-169  
 Project: 105474-050

### VOLATILE ORGANICS EPA 8260D

Matrix: Soil  
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID: FL358-MW9-37-38</b>						
Laboratory ID: 06-169-04						
Vinyl Chloride	ND	0.00082	EPA 8260D	6-20-22	6-20-22	
1,1-Dichloroethene	ND	0.00082	EPA 8260D	6-20-22	6-20-22	
(trans) 1,2-Dichloroethene	ND	0.00082	EPA 8260D	6-20-22	6-20-22	
(cis) 1,2-Dichloroethene	ND	0.00082	EPA 8260D	6-20-22	6-20-22	
Trichloroethene	ND	0.00082	EPA 8260D	6-20-22	6-20-22	
Tetrachloroethene	ND	0.00082	EPA 8260D	6-20-22	6-20-22	
<i>Surrogate: Percent Recovery Control Limits</i>						
Dibromofluoromethane	107	75-130				
Toluene-d8	109	78-128				
4-Bromofluorobenzene	98	71-130				
<b>Client ID: FL358-MW9-40-41</b>						
Laboratory ID: 06-169-05						
Vinyl Chloride	ND	0.00088	EPA 8260D	6-20-22	6-20-22	
1,1-Dichloroethene	ND	0.00088	EPA 8260D	6-20-22	6-20-22	
(trans) 1,2-Dichloroethene	ND	0.00088	EPA 8260D	6-20-22	6-20-22	
(cis) 1,2-Dichloroethene	ND	0.00088	EPA 8260D	6-20-22	6-20-22	
Trichloroethene	ND	0.00088	EPA 8260D	6-20-22	6-20-22	
Tetrachloroethene	ND	0.00088	EPA 8260D	6-20-22	6-20-22	
<i>Surrogate: Percent Recovery Control Limits</i>						
Dibromofluoromethane	108	75-130				
Toluene-d8	100	78-128				
4-Bromofluorobenzene	100	71-130				
<b>Client ID: FL358-MW9-41-42</b>						
Laboratory ID: 06-169-06						
Vinyl Chloride	ND	0.00082	EPA 8260D	6-20-22	6-20-22	
1,1-Dichloroethene	ND	0.00082	EPA 8260D	6-20-22	6-20-22	
(trans) 1,2-Dichloroethene	ND	0.00082	EPA 8260D	6-20-22	6-20-22	
(cis) 1,2-Dichloroethene	ND	0.00082	EPA 8260D	6-20-22	6-20-22	
Trichloroethene	ND	0.00082	EPA 8260D	6-20-22	6-20-22	
Tetrachloroethene	ND	0.00082	EPA 8260D	6-20-22	6-20-22	
<i>Surrogate: Percent Recovery Control Limits</i>						
Dibromofluoromethane	107	75-130				
Toluene-d8	97	78-128				
4-Bromofluorobenzene	98	71-130				



Date of Report: June 24, 2022  
 Samples Submitted: June 17, 2022  
 Laboratory Reference: 2206-169  
 Project: 105474-050

### VOLATILE ORGANICS EPA 8260D

Matrix: Soil  
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>Dup-220616</b>					
Laboratory ID:	06-169-07					
Vinyl Chloride	ND	0.00074	EPA 8260D	6-20-22	6-20-22	
1,1-Dichloroethene	ND	0.00074	EPA 8260D	6-20-22	6-20-22	
(trans) 1,2-Dichloroethene	ND	0.00074	EPA 8260D	6-20-22	6-20-22	
(cis) 1,2-Dichloroethene	ND	0.00074	EPA 8260D	6-20-22	6-20-22	
Trichloroethene	ND	0.00074	EPA 8260D	6-20-22	6-20-22	
Tetrachloroethene	ND	0.00074	EPA 8260D	6-20-22	6-20-22	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>102</i>	<i>75-130</i>				
<i>Toluene-d8</i>	<i>94</i>	<i>78-128</i>				
<i>4-Bromofluorobenzene</i>	<i>102</i>	<i>71-130</i>				



Date of Report: June 24, 2022  
 Samples Submitted: June 17, 2022  
 Laboratory Reference: 2206-169  
 Project: 105474-050

**VOLATILE ORGANICS EPA 8260D  
 QUALITY CONTROL**

Matrix: Soil  
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>METHOD BLANK</b>						
Laboratory ID:	MB0620S2					
Vinyl Chloride	ND	0.0010	EPA 8260D	6-20-22	6-20-22	
1,1-Dichloroethene	ND	0.0010	EPA 8260D	6-20-22	6-20-22	
(trans) 1,2-Dichloroethene	ND	0.0010	EPA 8260D	6-20-22	6-20-22	
(cis) 1,2-Dichloroethene	ND	0.0010	EPA 8260D	6-20-22	6-20-22	
Trichloroethene	ND	0.0010	EPA 8260D	6-20-22	6-20-22	
Tetrachloroethene	ND	0.0010	EPA 8260D	6-20-22	6-20-22	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>100</i>	<i>75-130</i>				
<i>Toluene-d8</i>	<i>98</i>	<i>78-128</i>				
<i>4-Bromofluorobenzene</i>	<i>99</i>	<i>71-130</i>				

Analyte	Result		Spike Level		Source Result	Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
<b>MATRIX SPIKES</b>											
Laboratory ID:	06-157-12										
	MS	MSD	MS	MSD		MS	MSD				
1,1-Dichloroethene	<b>0.0375</b>	<b>0.0364</b>	0.0500	0.0500	ND	75	73	65-131	3	25	
Benzene	<b>0.0399</b>	<b>0.0382</b>	0.0500	0.0500	ND	80	76	67-131	4	28	
Trichloroethene	<b>0.0418</b>	<b>0.0413</b>	0.0500	0.0500	ND	84	83	61-124	1	24	
Toluene	<b>0.0395</b>	<b>0.0409</b>	0.0500	0.0500	ND	79	82	66-128	3	26	
Chlorobenzene	<b>0.0377</b>	<b>0.0357</b>	0.0500	0.0500	ND	75	71	56-117	5	31	
<i>Surrogate:</i>											
<i>Dibromofluoromethane</i>						99	101	75-130			
<i>Toluene-d8</i>						96	102	78-128			
<i>4-Bromofluorobenzene</i>						101	99	71-130			



Date of Report: June 24, 2022  
 Samples Submitted: June 17, 2022  
 Laboratory Reference: 2206-169  
 Project: 105474-050

### VOLATILE ORGANICS EPA 8260D

Matrix: Water  
 Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>Rinsate-220616</b>					
Laboratory ID:	06-169-08					
Vinyl Chloride	ND	0.20	EPA 8260D	6-22-22	6-22-22	
1,1-Dichloroethene	ND	0.20	EPA 8260D	6-22-22	6-22-22	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260D	6-22-22	6-22-22	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260D	6-22-22	6-22-22	
Trichloroethene	ND	0.20	EPA 8260D	6-22-22	6-22-22	
Tetrachloroethene	ND	0.20	EPA 8260D	6-22-22	6-22-22	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	94	75-127				
<i>Toluene-d8</i>	94	80-127				
<i>4-Bromofluorobenzene</i>	105	78-125				

<b>Client ID:</b>	<b>TB-220616</b>					
Laboratory ID:	06-169-09					
Vinyl Chloride	ND	0.20	EPA 8260D	6-22-22	6-22-22	
1,1-Dichloroethene	ND	0.20	EPA 8260D	6-22-22	6-22-22	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260D	6-22-22	6-22-22	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260D	6-22-22	6-22-22	
Trichloroethene	ND	0.20	EPA 8260D	6-22-22	6-22-22	
Tetrachloroethene	ND	0.20	EPA 8260D	6-22-22	6-22-22	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	93	75-127				
<i>Toluene-d8</i>	93	80-127				
<i>4-Bromofluorobenzene</i>	104	78-125				



Date of Report: June 24, 2022  
 Samples Submitted: June 17, 2022  
 Laboratory Reference: 2206-169  
 Project: 105474-050

**VOLATILE ORGANICS EPA 8260D  
 QUALITY CONTROL**

Matrix: Water  
 Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>METHOD BLANK</b>						
Laboratory ID:	MB0622W2					
Vinyl Chloride	ND	0.20	EPA 8260D	6-22-22	6-22-22	
1,1-Dichloroethene	ND	0.20	EPA 8260D	6-22-22	6-22-22	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260D	6-22-22	6-22-22	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260D	6-22-22	6-22-22	
Trichloroethene	ND	0.20	EPA 8260D	6-22-22	6-22-22	
Tetrachloroethene	ND	0.20	EPA 8260D	6-22-22	6-22-22	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>91</i>	<i>75-127</i>				
<i>Toluene-d8</i>	<i>96</i>	<i>80-127</i>				
<i>4-Bromofluorobenzene</i>	<i>105</i>	<i>78-125</i>				

Analyte	Result		Spike Level		Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
<b>SPIKE BLANKS</b>										
Laboratory ID:	SB0622W2									
	SB	SBD	SB	SBD	SB	SBD				
1,1-Dichloroethene	<b>11.2</b>	<b>11.0</b>	10.0	10.0	112	110	78-125	2	19	
Benzene	<b>10.8</b>	<b>10.6</b>	10.0	10.0	108	106	80-121	2	16	
Trichloroethene	<b>11.0</b>	<b>11.2</b>	10.0	10.0	110	112	80-122	2	18	
Toluene	<b>10.8</b>	<b>10.7</b>	10.0	10.0	108	107	80-120	1	18	
Chlorobenzene	<b>10.5</b>	<b>10.4</b>	10.0	10.0	105	104	80-120	1	17	
<i>Surrogate:</i>										
<i>Dibromofluoromethane</i>					<i>91</i>	<i>90</i>	<i>75-127</i>			
<i>Toluene-d8</i>					<i>95</i>	<i>93</i>	<i>80-127</i>			
<i>4-Bromofluorobenzene</i>					<i>106</i>	<i>104</i>	<i>78-125</i>			



Date of Report: June 24, 2022  
Samples Submitted: June 17, 2022  
Laboratory Reference: 2206-169  
Project: 105474-050

**% MOISTURE**

<b>Client ID</b>	<b>Lab ID</b>	<b>% Moisture</b>	<b>Date Analyzed</b>
FL358-MW9-22-23	06-169-01	12	6-17-22
FL358-MW9-27-28	06-169-02	7	6-17-22
FL358-MW9-31-32	06-169-03	16	6-17-22
FL358-MW9-37-38	06-169-04	9	6-17-22
FL358-MW9-40-41	06-169-05	7	6-17-22
FL358-MW9-41-42	06-169-06	8	6-17-22
Dup-220616	06-169-07	8	6-17-22





### Data Qualifiers and Abbreviations

- A - Due to a high sample concentration, the amount spiked is insufficient for meaningful MS/MSD recovery data.
  - B - The analyte indicated was also found in the blank sample.
  - C - The duplicate RPD is outside control limits due to high result variability when analyte concentrations are within five times the quantitation limit.
  - E - The value reported exceeds the quantitation range and is an estimate.
  - F - Surrogate recovery data is not available due to the high concentration of coeluting target compounds.
  - H - The analyte indicated is a common laboratory solvent and may have been introduced during sample preparation, and be impacting the sample result.
  - I - Compound recovery is outside of the control limits.
  - J - The value reported was below the practical quantitation limit. The value is an estimate.
  - K - Sample duplicate RPD is outside control limits due to sample inhomogeneity. The sample was re-extracted and re-analyzed with similar results.
  - L - The RPD is outside of the control limits.
  - M - Hydrocarbons in the gasoline range are impacting the diesel range result.
  - M1 - Hydrocarbons in the gasoline range (toluene-naphthalene) are present in the sample.
  - N - Hydrocarbons in the lube oil range are impacting the diesel range result.
  - N1 - Hydrocarbons in diesel range are impacting lube oil range results.
  - O - Hydrocarbons indicative of heavier fuels are present in the sample and are impacting the gasoline result.
  - P - The RPD of the detected concentrations between the two columns is greater than 40.
  - Q - Surrogate recovery is outside of the control limits.
  - S - Surrogate recovery data is not available due to the necessary dilution of the sample.
  - T - The sample chromatogram is not similar to a typical \_\_\_\_\_.
  - U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.
  - U1 - The practical quantitation limit is elevated due to interferences present in the sample.
  - V - Matrix Spike/Matrix Spike Duplicate recoveries are outside control limits due to matrix effects.
  - W - Matrix Spike/Matrix Spike Duplicate RPD are outside control limits due to matrix effects.
  - X - Sample extract treated with a mercury cleanup procedure.
  - X1 - Sample extract treated with a sulfuric acid/silica gel cleanup procedure.
  - X2 - Sample extract treated with a silica gel cleanup procedure.
  - Y - The calibration verification for this analyte exceeded the 20% drift specified in methods 8260 & 8270, and therefore the reported result should be considered an estimate. The overall performance of the calibration verification standard met the acceptance criteria of the method.
  - Y1 - Negative effects of the matrix from this sample on the instrument caused values for this analyte in the bracketing continuing calibration verification standard (CCVs) to be outside of 20% acceptance criteria. Because of this, quantitation limits and sample concentrations should be considered estimates.
  - Z -
- ND - Not Detected at PQL  
 PQL - Practical Quantitation Limit  
 RPD - Relative Percent Difference







14648 NE 95<sup>th</sup> Street, Redmond, WA 98052 • (425) 883-3881

July 1, 2022

Joseph Sawdey  
Shannon & Wilson, Inc.  
400 N 34th Street, Suite 100  
Seattle, WA 98103

Re: Analytical Data for Project 105474-050  
Laboratory Reference No. 2206-239

Dear Joseph:

Enclosed are the analytical results and associated quality control data for samples submitted on June 22, 2022.

The standard policy of OnSite Environmental, Inc. is to store your samples for 30 days from the date of receipt. If you require longer storage, please contact the laboratory.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning the data, or need additional information, please feel free to call me.

Sincerely,

A handwritten signature in black ink, appearing to read "D. Baumeister", with a long horizontal flourish extending to the right.

David Baumeister  
Project Manager

Enclosures



---

OnSite Environmental, Inc. 14648 NE 95<sup>th</sup> Street, Redmond, WA 98052 (425) 883-3881

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: July 1, 2022  
Samples Submitted: June 22, 2022  
Laboratory Reference: 2206-239  
Project: 105474-050

### Case Narrative

Samples were collected on June 21, 2022 and received by the laboratory on June 22, 2022. They were maintained at the laboratory at a temperature of 2°C to 6°C.

Please note that any and all soil sample results are reported on a dry-weight basis, unless otherwise noted below.

General QA/QC issues associated with the analytical data enclosed in this laboratory report will be indicated with a reference to a comment or explanation on the Data Qualifier page. More complex and involved QA/QC issues will be discussed in detail below.



Date of Report: July 1, 2022  
 Samples Submitted: June 22, 2022  
 Laboratory Reference: 2206-239  
 Project: 105474-050

### VOLATILE ORGANICS EPA 8260D

Matrix: Soil  
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>FL358-MW6-24-25</b>					
Laboratory ID:	06-239-01					
Vinyl Chloride	0.0025	0.00042	EPA 8260D	6-24-22	6-24-22	
1,1-Dichloroethene	ND	0.00042	EPA 8260D	6-24-22	6-24-22	
(trans) 1,2-Dichloroethene	ND	0.00042	EPA 8260D	6-24-22	6-24-22	
(cis) 1,2-Dichloroethene	0.039	0.00042	EPA 8260D	6-24-22	6-24-22	
Trichloroethene	0.016	0.00042	EPA 8260D	6-24-22	6-24-22	
Tetrachloroethene	0.10	0.050	EPA 8260D	6-29-22	6-30-22	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>103</i>	<i>75-130</i>				
<i>Toluene-d8</i>	<i>100</i>	<i>78-128</i>				
<i>4-Bromofluorobenzene</i>	<i>112</i>	<i>71-130</i>				

<b>Client ID:</b>	<b>FL358-MW6-29-30</b>					
Laboratory ID:	06-239-02					
Vinyl Chloride	ND	0.00076	EPA 8260D	6-24-22	6-24-22	
1,1-Dichloroethene	ND	0.00076	EPA 8260D	6-24-22	6-24-22	
(trans) 1,2-Dichloroethene	ND	0.00076	EPA 8260D	6-24-22	6-24-22	
(cis) 1,2-Dichloroethene	ND	0.00076	EPA 8260D	6-24-22	6-24-22	
Trichloroethene	ND	0.00076	EPA 8260D	6-24-22	6-24-22	
Tetrachloroethene	ND	0.00076	EPA 8260D	6-24-22	6-24-22	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>105</i>	<i>75-130</i>				
<i>Toluene-d8</i>	<i>103</i>	<i>78-128</i>				
<i>4-Bromofluorobenzene</i>	<i>112</i>	<i>71-130</i>				

<b>Client ID:</b>	<b>FL358-MW6-34-35</b>					
Laboratory ID:	06-239-03					
Vinyl Chloride	ND	0.00089	EPA 8260D	6-24-22	6-24-22	
1,1-Dichloroethene	ND	0.00089	EPA 8260D	6-24-22	6-24-22	
(trans) 1,2-Dichloroethene	ND	0.00089	EPA 8260D	6-24-22	6-24-22	
(cis) 1,2-Dichloroethene	0.0018	0.00089	EPA 8260D	6-24-22	6-24-22	
Trichloroethene	ND	0.00089	EPA 8260D	6-24-22	6-24-22	
Tetrachloroethene	ND	0.00089	EPA 8260D	6-24-22	6-24-22	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>104</i>	<i>75-130</i>				
<i>Toluene-d8</i>	<i>102</i>	<i>78-128</i>				
<i>4-Bromofluorobenzene</i>	<i>112</i>	<i>71-130</i>				



Date of Report: July 1, 2022  
 Samples Submitted: June 22, 2022  
 Laboratory Reference: 2206-239  
 Project: 105474-050

### VOLATILE ORGANICS EPA 8260D

Matrix: Soil  
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>FL358-MW6-36-37</b>					
Laboratory ID:	06-239-04					
Vinyl Chloride	ND	0.00082	EPA 8260D	6-24-22	6-24-22	
1,1-Dichloroethene	ND	0.00082	EPA 8260D	6-24-22	6-24-22	
(trans) 1,2-Dichloroethene	ND	0.00082	EPA 8260D	6-24-22	6-24-22	
(cis) 1,2-Dichloroethene	ND	0.00082	EPA 8260D	6-24-22	6-24-22	
Trichloroethene	ND	0.00082	EPA 8260D	6-24-22	6-24-22	
Tetrachloroethene	ND	0.00082	EPA 8260D	6-24-22	6-24-22	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>103</i>	<i>75-130</i>				
<i>Toluene-d8</i>	<i>100</i>	<i>78-128</i>				
<i>4-Bromofluorobenzene</i>	<i>110</i>	<i>71-130</i>				

<b>Client ID:</b>	<b>FL358-MW6-37-38</b>					
Laboratory ID:	06-239-05					
Vinyl Chloride	ND	0.00095	EPA 8260D	6-24-22	6-24-22	
1,1-Dichloroethene	ND	0.00095	EPA 8260D	6-24-22	6-24-22	
(trans) 1,2-Dichloroethene	ND	0.00095	EPA 8260D	6-24-22	6-24-22	
(cis) 1,2-Dichloroethene	ND	0.00095	EPA 8260D	6-24-22	6-24-22	
Trichloroethene	ND	0.00095	EPA 8260D	6-24-22	6-24-22	
Tetrachloroethene	ND	0.00095	EPA 8260D	6-24-22	6-24-22	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>97</i>	<i>75-130</i>				
<i>Toluene-d8</i>	<i>94</i>	<i>78-128</i>				
<i>4-Bromofluorobenzene</i>	<i>101</i>	<i>71-130</i>				

<b>Client ID:</b>	<b>Dup-220621</b>					
Laboratory ID:	06-239-07					
Vinyl Chloride	0.0029	0.00085	EPA 8260D	6-24-22	6-24-22	
1,1-Dichloroethene	ND	0.00085	EPA 8260D	6-24-22	6-24-22	
(trans) 1,2-Dichloroethene	ND	0.00085	EPA 8260D	6-24-22	6-24-22	
(cis) 1,2-Dichloroethene	0.048	0.00085	EPA 8260D	6-24-22	6-24-22	
Trichloroethene	0.021	0.00085	EPA 8260D	6-24-22	6-24-22	
Tetrachloroethene	0.16	0.00085	EPA 8260D	6-24-22	6-24-22	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>102</i>	<i>75-130</i>				
<i>Toluene-d8</i>	<i>100</i>	<i>78-128</i>				
<i>4-Bromofluorobenzene</i>	<i>112</i>	<i>71-130</i>				



Date of Report: July 1, 2022  
 Samples Submitted: June 22, 2022  
 Laboratory Reference: 2206-239  
 Project: 105474-050

**VOLATILE ORGANICS EPA 8260D  
 QUALITY CONTROL**

Matrix: Soil  
 Units: mg/kg

<b>Analyte</b>	<b>Result</b>	<b>PQL</b>	<b>Method</b>	<b>Date Prepared</b>	<b>Date Analyzed</b>	<b>Flags</b>
<b>METHOD BLANK</b>						
Laboratory ID:	MB0624S1					
Vinyl Chloride	ND	0.0010	EPA 8260D	6-24-22	6-24-22	
1,1-Dichloroethene	ND	0.0010	EPA 8260D	6-24-22	6-24-22	
(trans) 1,2-Dichloroethene	ND	0.0010	EPA 8260D	6-24-22	6-24-22	
(cis) 1,2-Dichloroethene	ND	0.0010	EPA 8260D	6-24-22	6-24-22	
Trichloroethene	ND	0.0010	EPA 8260D	6-24-22	6-24-22	
Tetrachloroethene	ND	0.0010	EPA 8260D	6-24-22	6-24-22	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>95</i>	<i>75-130</i>				
<i>Toluene-d8</i>	<i>95</i>	<i>78-128</i>				
<i>4-Bromofluorobenzene</i>	<i>103</i>	<i>71-130</i>				
Laboratory ID:	MB0629S1					
Vinyl Chloride	ND	0.0013	EPA 8260D	6-29-22	6-29-22	
1,1-Dichloroethene	ND	0.0010	EPA 8260D	6-29-22	6-29-22	
(trans) 1,2-Dichloroethene	ND	0.0010	EPA 8260D	6-29-22	6-29-22	
(cis) 1,2-Dichloroethene	ND	0.0010	EPA 8260D	6-29-22	6-29-22	
Trichloroethene	ND	0.0010	EPA 8260D	6-29-22	6-29-22	
Tetrachloroethene	ND	0.0010	EPA 8260D	6-29-22	6-29-22	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>112</i>	<i>75-130</i>				
<i>Toluene-d8</i>	<i>99</i>	<i>78-128</i>				
<i>4-Bromofluorobenzene</i>	<i>94</i>	<i>71-130</i>				



Date of Report: July 1, 2022  
 Samples Submitted: June 22, 2022  
 Laboratory Reference: 2206-239  
 Project: 105474-050

**VOLATILE ORGANICS EPA 8260D  
 QUALITY CONTROL**

Matrix: Soil  
 Units: mg/kg

Analyte	Result	Spike Level	Percent Recovery	Recovery Limits	Flags					
<b>SPIKE BLANK</b>										
Laboratory ID:	SB0624S1									
1,1-Dichloroethene	<b>0.0501</b>	0.0500	100	75-129						
Benzene	<b>0.0534</b>	0.0500	107	80-122						
Trichloroethene	<b>0.0552</b>	0.0500	110	80-129						
Toluene	<b>0.0542</b>	0.0500	108	80-120						
Chlorobenzene	<b>0.0524</b>	0.0500	105	80-120						
<i>Surrogate:</i>										
Dibromofluoromethane			95	75-130						
Toluene-d8			95	78-128						
4-Bromofluorobenzene			105	71-130						
Laboratory ID:	SB0629S1									
	SB	SBD	SB	SBD	SB	SBD				
1,1-Dichloroethene	<b>0.0458</b>	<b>0.0473</b>	0.0500	0.0500	92	95	75-129	3	19	
Benzene	<b>0.0446</b>	<b>0.0458</b>	0.0500	0.0500	89	92	80-122	3	18	
Trichloroethene	<b>0.0521</b>	<b>0.0522</b>	0.0500	0.0500	104	104	80-129	0	18	
Toluene	<b>0.0479</b>	<b>0.0481</b>	0.0500	0.0500	96	96	80-120	0	18	
Chlorobenzene	<b>0.0534</b>	<b>0.0535</b>	0.0500	0.0500	107	107	80-120	0	18	
<i>Surrogate:</i>										
Dibromofluoromethane					100	103	75-130			
Toluene-d8					94	93	78-128			
4-Bromofluorobenzene					94	95	71-130			
<b>MATRIX SPIKES</b>										
Laboratory ID:	06-239-05									
	MS	MSD	MS	MSD	MS	MSD				
1,1-Dichloroethene	<b>0.0328</b>	<b>0.0361</b>	0.0401	0.0427	ND	82	85	65-131	10	25
Benzene	<b>0.0345</b>	<b>0.0391</b>	0.0401	0.0427	ND	86	92	67-131	13	28
Trichloroethene	<b>0.0344</b>	<b>0.0393</b>	0.0401	0.0427	ND	86	92	61-124	13	24
Toluene	<b>0.0327</b>	<b>0.0372</b>	0.0401	0.0427	ND	81	87	66-128	13	26
Chlorobenzene	<b>0.0303</b>	<b>0.0338</b>	0.0401	0.0427	ND	76	79	56-117	11	31
<i>Surrogate:</i>										
Dibromofluoromethane						96	98	75-130		
Toluene-d8						95	95	78-128		
4-Bromofluorobenzene						102	104	71-130		



Date of Report: July 1, 2022  
 Samples Submitted: June 22, 2022  
 Laboratory Reference: 2206-239  
 Project: 105474-050

### VOLATILE ORGANICS EPA 8260D

Matrix: Water  
 Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>Rinsate-220621</b>					
Laboratory ID:	06-239-06					
Vinyl Chloride	ND	0.20	EPA 8260D	6-23-22	6-23-22	
1,1-Dichloroethene	ND	0.20	EPA 8260D	6-23-22	6-23-22	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260D	6-23-22	6-23-22	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260D	6-23-22	6-23-22	
Trichloroethene	ND	0.20	EPA 8260D	6-23-22	6-23-22	
Tetrachloroethene	ND	0.20	EPA 8260D	6-23-22	6-23-22	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>104</i>	<i>75-127</i>				
<i>Toluene-d8</i>	<i>100</i>	<i>80-127</i>				
<i>4-Bromofluorobenzene</i>	<i>87</i>	<i>78-125</i>				

<b>Client ID:</b>	<b>TB-220621</b>					
Laboratory ID:	06-239-08					
Vinyl Chloride	ND	0.20	EPA 8260D	6-23-22	6-23-22	
1,1-Dichloroethene	ND	0.20	EPA 8260D	6-23-22	6-23-22	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260D	6-23-22	6-23-22	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260D	6-23-22	6-23-22	
Trichloroethene	ND	0.20	EPA 8260D	6-23-22	6-23-22	
Tetrachloroethene	ND	0.20	EPA 8260D	6-23-22	6-23-22	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>105</i>	<i>75-127</i>				
<i>Toluene-d8</i>	<i>100</i>	<i>80-127</i>				
<i>4-Bromofluorobenzene</i>	<i>86</i>	<i>78-125</i>				



Date of Report: July 1, 2022  
 Samples Submitted: June 22, 2022  
 Laboratory Reference: 2206-239  
 Project: 105474-050

**VOLATILE ORGANICS EPA 8260D  
 QUALITY CONTROL**

Matrix: Water  
 Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>METHOD BLANK</b>						
Laboratory ID:	MB0623W1					
Vinyl Chloride	ND	0.20	EPA 8260D	6-23-22	6-23-22	
1,1-Dichloroethene	ND	0.20	EPA 8260D	6-23-22	6-23-22	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260D	6-23-22	6-23-22	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260D	6-23-22	6-23-22	
Trichloroethene	ND	0.20	EPA 8260D	6-23-22	6-23-22	
Tetrachloroethene	ND	0.20	EPA 8260D	6-23-22	6-23-22	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	108	75-127				
<i>Toluene-d8</i>	103	80-127				
<i>4-Bromofluorobenzene</i>	89	78-125				

Analyte	Result		Spike Level		Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
<b>SPIKE BLANKS</b>										
Laboratory ID:	SB0623W1									
	SB	SBD	SB	SBD	SB	SBD				
1,1-Dichloroethene	9.44	9.61	10.0	10.0	94	96	78-125	2	19	
Benzene	9.03	9.11	10.0	10.0	90	91	80-121	1	16	
Trichloroethene	9.49	9.05	10.0	10.0	95	91	80-122	5	18	
Toluene	9.33	9.12	10.0	10.0	93	91	80-120	2	18	
Chlorobenzene	10.2	10.3	10.0	10.0	102	103	80-120	1	17	
<i>Surrogate:</i>										
<i>Dibromofluoromethane</i>					105	110	75-127			
<i>Toluene-d8</i>					101	103	80-127			
<i>4-Bromofluorobenzene</i>					93	94	78-125			



Date of Report: July 1, 2022  
Samples Submitted: June 22, 2022  
Laboratory Reference: 2206-239  
Project: 105474-050

**% MOISTURE**

<b>Client ID</b>	<b>Lab ID</b>	<b>% Moisture</b>	<b>Date Analyzed</b>
FL358-MW6-24-25	06-239-01	13	6-23-22
FL358-MW6-29-30	06-239-02	9	6-23-22
FL358-MW6-34-35	06-239-03	12	6-23-22
FL358-MW6-36-37	06-239-04	8	6-23-22
FL358-MW6-37-38	06-239-05	13	6-23-22
Dup-220621	06-239-07	15	6-23-22





### Data Qualifiers and Abbreviations

- A - Due to a high sample concentration, the amount spiked is insufficient for meaningful MS/MSD recovery data.
  - B - The analyte indicated was also found in the blank sample.
  - C - The duplicate RPD is outside control limits due to high result variability when analyte concentrations are within five times the quantitation limit.
  - E - The value reported exceeds the quantitation range and is an estimate.
  - F - Surrogate recovery data is not available due to the high concentration of coeluting target compounds.
  - H - The analyte indicated is a common laboratory solvent and may have been introduced during sample preparation, and be impacting the sample result.
  - I - Compound recovery is outside of the control limits.
  - J - The value reported was below the practical quantitation limit. The value is an estimate.
  - K - Sample duplicate RPD is outside control limits due to sample inhomogeneity. The sample was re-extracted and re-analyzed with similar results.
  - L - The RPD is outside of the control limits.
  - M - Hydrocarbons in the gasoline range are impacting the diesel range result.
  - M1 - Hydrocarbons in the gasoline range (toluene-naphthalene) are present in the sample.
  - N - Hydrocarbons in the lube oil range are impacting the diesel range result.
  - N1 - Hydrocarbons in diesel range are impacting lube oil range results.
  - O - Hydrocarbons indicative of heavier fuels are present in the sample and are impacting the gasoline result.
  - P - The RPD of the detected concentrations between the two columns is greater than 40.
  - Q - Surrogate recovery is outside of the control limits.
  - S - Surrogate recovery data is not available due to the necessary dilution of the sample.
  - T - The sample chromatogram is not similar to a typical \_\_\_\_\_.
  - U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.
  - U1 - The practical quantitation limit is elevated due to interferences present in the sample.
  - V - Matrix Spike/Matrix Spike Duplicate recoveries are outside control limits due to matrix effects.
  - W - Matrix Spike/Matrix Spike Duplicate RPD are outside control limits due to matrix effects.
  - X - Sample extract treated with a mercury cleanup procedure.
  - X1 - Sample extract treated with a sulfuric acid/silica gel cleanup procedure.
  - X2 - Sample extract treated with a silica gel cleanup procedure.
  - Y - The calibration verification for this analyte exceeded the 20% drift specified in methods 8260 & 8270, and therefore the reported result should be considered an estimate. The overall performance of the calibration verification standard met the acceptance criteria of the method.
  - Y1 - Negative effects of the matrix from this sample on the instrument caused values for this analyte in the bracketing continuing calibration verification standard (CCVs) to be outside of 20% acceptance criteria. Because of this, quantitation limits and sample concentrations should be considered estimates.
  - Z -
- ND - Not Detected at PQL  
 PQL - Practical Quantitation Limit  
 RPD - Relative Percent Difference







14648 NE 95<sup>th</sup> Street, Redmond, WA 98052 • (425) 883-3881

June 30, 2022

Joseph Sawdey  
Shannon & Wilson, Inc.  
400 N 34th Street, Suite 100  
Seattle, WA 98103

Re: Analytical Data for Project 105474-050  
Laboratory Reference No. 2206-240

Dear Joseph:

Enclosed are the analytical results and associated quality control data for samples submitted on June 22, 2022.

The standard policy of OnSite Environmental, Inc. is to store your samples for 30 days from the date of receipt. If you require longer storage, please contact the laboratory.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning the data, or need additional information, please feel free to call me.

Sincerely,

A handwritten signature in black ink, appearing to read "DB", with a long horizontal flourish extending to the right.

David Baumeister  
Project Manager

Enclosures



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OnSite Environmental, Inc. 14648 NE 95<sup>th</sup> Street, Redmond, WA 98052 (425) 883-3881

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: June 30, 2022  
Samples Submitted: June 22, 2022  
Laboratory Reference: 2206-240  
Project: 105474-050

### Case Narrative

Samples were collected on June 21 and 22, 2022 and received by the laboratory on June 22, 2022. They were maintained at the laboratory at a temperature of 2°C to 6°C.

Please note that any and all soil sample results are reported on a dry-weight basis, unless otherwise noted below.

General QA/QC issues associated with the analytical data enclosed in this laboratory report will be indicated with a reference to a comment or explanation on the Data Qualifier page. More complex and involved QA/QC issues will be discussed in detail below.

#### Volatiles Analysis

The client-requested PQL of 0.001 ppm is not achievable for some compounds in sample FL358-MW5A-25-26 due to the necessary dilution of the sample.

Any other QA/QC issues associated with this extraction and analysis will be indicated with a footnote reference and discussed in detail on the Data Qualifier page.



Date of Report: June 30, 2022  
 Samples Submitted: June 22, 2022  
 Laboratory Reference: 2206-240  
 Project: 105474-050

### VOLATILE ORGANICS EPA 8260D

Matrix: Soil  
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>FL358-MW5-21.5-22.5</b>					
Laboratory ID:	06-240-01					
Vinyl Chloride	ND	0.00078	EPA 8260D	6-28-22	6-28-22	
1,1-Dichloroethene	ND	0.00078	EPA 8260D	6-28-22	6-28-22	
(trans) 1,2-Dichloroethene	ND	0.00078	EPA 8260D	6-28-22	6-28-22	
(cis) 1,2-Dichloroethene	0.0018	0.00078	EPA 8260D	6-28-22	6-28-22	
Trichloroethene	0.0022	0.00078	EPA 8260D	6-28-22	6-28-22	
Tetrachloroethene	0.028	0.00078	EPA 8260D	6-28-22	6-28-22	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	99	75-130				
<i>Toluene-d8</i>	96	78-128				
<i>4-Bromofluorobenzene</i>	96	71-130				
<b>Client ID:</b>	<b>FL358-MW5-24.5-25.5</b>					
Laboratory ID:	06-240-02					
Vinyl Chloride	ND	0.00076	EPA 8260D	6-28-22	6-28-22	
1,1-Dichloroethene	ND	0.00076	EPA 8260D	6-28-22	6-28-22	
(trans) 1,2-Dichloroethene	ND	0.00076	EPA 8260D	6-28-22	6-28-22	
(cis) 1,2-Dichloroethene	0.032	0.00076	EPA 8260D	6-28-22	6-28-22	
Trichloroethene	0.038	0.00076	EPA 8260D	6-28-22	6-28-22	
Tetrachloroethene	1.1	0.044	EPA 8260D	6-27-22	6-27-22	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	101	75-130				
<i>Toluene-d8</i>	97	78-128				
<i>4-Bromofluorobenzene</i>	97	71-130				
<b>Client ID:</b>	<b>FL358-MW5-28-29</b>					
Laboratory ID:	06-240-03					
Vinyl Chloride	0.0024	0.00089	EPA 8260D	6-27-22	6-27-22	
1,1-Dichloroethene	ND	0.00089	EPA 8260D	6-27-22	6-27-22	
(trans) 1,2-Dichloroethene	0.0014	0.00089	EPA 8260D	6-27-22	6-27-22	
(cis) 1,2-Dichloroethene	0.27	0.046	EPA 8260D	6-28-22	6-28-22	
Trichloroethene	0.34	0.046	EPA 8260D	6-28-22	6-28-22	
Tetrachloroethene	11	0.046	EPA 8260D	6-28-22	6-28-22	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	94	75-130				
<i>Toluene-d8</i>	96	78-128				
<i>4-Bromofluorobenzene</i>	95	71-130				



Date of Report: June 30, 2022  
 Samples Submitted: June 22, 2022  
 Laboratory Reference: 2206-240  
 Project: 105474-050

### VOLATILE ORGANICS EPA 8260D

Matrix: Soil  
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>FL358-MW5-33-34</b>					
Laboratory ID:	06-240-04					
Vinyl Chloride	ND	0.00091	EPA 8260D	6-28-22	6-28-22	
1,1-Dichloroethene	ND	0.00091	EPA 8260D	6-28-22	6-28-22	
(trans) 1,2-Dichloroethene	ND	0.00091	EPA 8260D	6-28-22	6-28-22	
(cis) 1,2-Dichloroethene	ND	0.00091	EPA 8260D	6-28-22	6-28-22	
Trichloroethene	ND	0.00091	EPA 8260D	6-28-22	6-28-22	
Tetrachloroethene	ND	0.00091	EPA 8260D	6-28-22	6-28-22	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	95	75-130				
<i>Toluene-d8</i>	95	78-128				
<i>4-Bromofluorobenzene</i>	97	71-130				

<b>Client ID:</b>	<b>FL358-MW5-36-37</b>					
Laboratory ID:	06-240-05					
Vinyl Chloride	ND	0.00084	EPA 8260D	6-28-22	6-28-22	
1,1-Dichloroethene	ND	0.00084	EPA 8260D	6-28-22	6-28-22	
(trans) 1,2-Dichloroethene	ND	0.00084	EPA 8260D	6-28-22	6-28-22	
(cis) 1,2-Dichloroethene	ND	0.00084	EPA 8260D	6-28-22	6-28-22	
Trichloroethene	ND	0.00084	EPA 8260D	6-28-22	6-28-22	
Tetrachloroethene	ND	0.00084	EPA 8260D	6-28-22	6-28-22	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	99	75-130				
<i>Toluene-d8</i>	95	78-128				
<i>4-Bromofluorobenzene</i>	94	71-130				

<b>Client ID:</b>	<b>FL358-MW5-37-38</b>					
Laboratory ID:	06-240-06					
Vinyl Chloride	ND	0.00079	EPA 8260D	6-27-22	6-27-22	
1,1-Dichloroethene	ND	0.00079	EPA 8260D	6-27-22	6-27-22	
(trans) 1,2-Dichloroethene	ND	0.00079	EPA 8260D	6-27-22	6-27-22	
(cis) 1,2-Dichloroethene	ND	0.00079	EPA 8260D	6-27-22	6-27-22	
Trichloroethene	ND	0.00079	EPA 8260D	6-27-22	6-27-22	
Tetrachloroethene	ND	0.00079	EPA 8260D	6-27-22	6-27-22	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	98	75-130				
<i>Toluene-d8</i>	97	78-128				
<i>4-Bromofluorobenzene</i>	90	71-130				



Date of Report: June 30, 2022  
 Samples Submitted: June 22, 2022  
 Laboratory Reference: 2206-240  
 Project: 105474-050

### VOLATILE ORGANICS EPA 8260D

Matrix: Soil  
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>FL358-MW5A-23-24</b>					
Laboratory ID:	06-240-07					
Vinyl Chloride	ND	0.00075	EPA 8260D	6-28-22	6-28-22	
1,1-Dichloroethene	ND	0.00075	EPA 8260D	6-28-22	6-28-22	
(trans) 1,2-Dichloroethene	ND	0.00075	EPA 8260D	6-28-22	6-28-22	
(cis) 1,2-Dichloroethene	0.0081	0.00075	EPA 8260D	6-28-22	6-28-22	
Trichloroethene	0.0091	0.00075	EPA 8260D	6-28-22	6-28-22	
Tetrachloroethene	0.41	0.039	EPA 8260D	6-27-22	6-27-22	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	95	75-130				
<i>Toluene-d8</i>	94	78-128				
<i>4-Bromofluorobenzene</i>	94	71-130				

<b>Client ID:</b>	<b>FL358-MW5A-25-26</b>					
Laboratory ID:	06-240-08					
Vinyl Chloride	ND	0.048	EPA 8260D	6-27-22	6-27-22	
1,1-Dichloroethene	ND	0.048	EPA 8260D	6-27-22	6-27-22	
(trans) 1,2-Dichloroethene	ND	0.048	EPA 8260D	6-27-22	6-27-22	
(cis) 1,2-Dichloroethene	0.25	0.048	EPA 8260D	6-27-22	6-27-22	
Trichloroethene	0.44	0.048	EPA 8260D	6-27-22	6-27-22	
Tetrachloroethene	150	0.97	EPA 8260D	6-27-22	6-28-22	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	91	75-130				
<i>Toluene-d8</i>	94	78-128				
<i>4-Bromofluorobenzene</i>	94	71-130				



Date of Report: June 30, 2022  
 Samples Submitted: June 22, 2022  
 Laboratory Reference: 2206-240  
 Project: 105474-050

**VOLATILE ORGANICS EPA 8260D  
 QUALITY CONTROL**

Matrix: Soil  
 Units: mg/kg

<b>Analyte</b>	<b>Result</b>	<b>PQL</b>	<b>Method</b>	<b>Date Prepared</b>	<b>Date Analyzed</b>	<b>Flags</b>
<b>METHOD BLANK</b>						
Laboratory ID:	MB0627S1					
Vinyl Chloride	ND	0.0010	EPA 8260D	6-27-22	6-27-22	
1,1-Dichloroethene	ND	0.0010	EPA 8260D	6-27-22	6-27-22	
(trans) 1,2-Dichloroethene	ND	0.0010	EPA 8260D	6-27-22	6-27-22	
(cis) 1,2-Dichloroethene	ND	0.0010	EPA 8260D	6-27-22	6-27-22	
Trichloroethene	ND	0.0010	EPA 8260D	6-27-22	6-27-22	
Tetrachloroethene	ND	0.0010	EPA 8260D	6-27-22	6-27-22	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	95	75-130				
<i>Toluene-d8</i>	97	78-128				
<i>4-Bromofluorobenzene</i>	95	71-130				
Laboratory ID:	MB0628S1					
Vinyl Chloride	ND	0.0010	EPA 8260D	6-28-22	6-28-22	
1,1-Dichloroethene	ND	0.0010	EPA 8260D	6-28-22	6-28-22	
(trans) 1,2-Dichloroethene	ND	0.0010	EPA 8260D	6-28-22	6-28-22	
(cis) 1,2-Dichloroethene	ND	0.0010	EPA 8260D	6-28-22	6-28-22	
Trichloroethene	ND	0.0010	EPA 8260D	6-28-22	6-28-22	
Tetrachloroethene	ND	0.0010	EPA 8260D	6-28-22	6-28-22	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	95	75-130				
<i>Toluene-d8</i>	95	78-128				
<i>4-Bromofluorobenzene</i>	96	71-130				

<b>Analyte</b>	<b>Result</b>	<b>Spike Level</b>	<b>Source Result</b>	<b>Percent Recovery</b>	<b>Recovery Limits</b>	<b>RPD</b>	<b>RPD Limit</b>	<b>Flags</b>
<b>MATRIX SPIKES</b>								
Laboratory ID:	06-240-06							
	MS	MSD	MS	MSD	MS	MSD		
1,1-Dichloroethene	<b>0.0296</b>	<b>0.0290</b>	0.0382	0.0380	ND	77 76	65-131	2 25
Benzene	<b>0.0280</b>	<b>0.0276</b>	0.0382	0.0380	ND	73 73	67-131	1 28
Trichloroethene	<b>0.0307</b>	<b>0.0295</b>	0.0382	0.0380	ND	80 78	61-124	4 24
Toluene	<b>0.0297</b>	<b>0.0284</b>	0.0382	0.0380	ND	78 75	66-128	4 26
Chlorobenzene	<b>0.0305</b>	<b>0.0280</b>	0.0382	0.0380	ND	80 74	56-117	9 31
<i>Surrogate:</i>								
<i>Dibromofluoromethane</i>					96	98	75-130	
<i>Toluene-d8</i>					97	98	78-128	
<i>4-Bromofluorobenzene</i>					97	99	71-130	



OnSite Environmental, Inc. 14648 NE 95<sup>th</sup> Street, Redmond, WA 98052 (425) 883-3881

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: June 30, 2022  
 Samples Submitted: June 22, 2022  
 Laboratory Reference: 2206-240  
 Project: 105474-050

### VOLATILE ORGANICS EPA 8260D

Matrix: Water  
 Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>Rinsate-220622</b>					
Laboratory ID:	06-240-09					
Vinyl Chloride	ND	0.20	EPA 8260D	6-23-22	6-23-22	
1,1-Dichloroethene	ND	0.20	EPA 8260D	6-23-22	6-23-22	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260D	6-23-22	6-23-22	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260D	6-23-22	6-23-22	
Trichloroethene	ND	0.20	EPA 8260D	6-23-22	6-23-22	
Tetrachloroethene	ND	0.20	EPA 8260D	6-23-22	6-23-22	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	105	75-127				
<i>Toluene-d8</i>	103	80-127				
<i>4-Bromofluorobenzene</i>	87	78-125				

<b>Client ID:</b>	<b>TB-220622</b>					
Laboratory ID:	06-240-10					
Vinyl Chloride	ND	0.20	EPA 8260D	6-23-22	6-23-22	
1,1-Dichloroethene	ND	0.20	EPA 8260D	6-23-22	6-23-22	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260D	6-23-22	6-23-22	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260D	6-23-22	6-23-22	
Trichloroethene	ND	0.20	EPA 8260D	6-23-22	6-23-22	
Tetrachloroethene	ND	0.20	EPA 8260D	6-23-22	6-23-22	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	107	75-127				
<i>Toluene-d8</i>	102	80-127				
<i>4-Bromofluorobenzene</i>	90	78-125				



Date of Report: June 30, 2022  
 Samples Submitted: June 22, 2022  
 Laboratory Reference: 2206-240  
 Project: 105474-050

**VOLATILE ORGANICS EPA 8260D  
 QUALITY CONTROL**

Matrix: Water  
 Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>METHOD BLANK</b>						
Laboratory ID:	MB0623W1					
Vinyl Chloride	ND	0.20	EPA 8260D	6-23-22	6-23-22	
1,1-Dichloroethene	ND	0.20	EPA 8260D	6-23-22	6-23-22	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260D	6-23-22	6-23-22	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260D	6-23-22	6-23-22	
Trichloroethene	ND	0.20	EPA 8260D	6-23-22	6-23-22	
Tetrachloroethene	ND	0.20	EPA 8260D	6-23-22	6-23-22	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	108	75-127				
<i>Toluene-d8</i>	103	80-127				
<i>4-Bromofluorobenzene</i>	89	78-125				

Analyte	Result		Spike Level		Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
<b>SPIKE BLANKS</b>										
Laboratory ID:	SB0623W1									
	SB	SBD	SB	SBD	SB	SBD				
1,1-Dichloroethene	9.44	9.61	10.0	10.0	94	96	78-125	2	19	
Benzene	9.03	9.11	10.0	10.0	90	91	80-121	1	16	
Trichloroethene	9.49	9.05	10.0	10.0	95	91	80-122	5	18	
Toluene	9.33	9.12	10.0	10.0	93	91	80-120	2	18	
Chlorobenzene	10.2	10.3	10.0	10.0	102	103	80-120	1	17	
<i>Surrogate:</i>										
<i>Dibromofluoromethane</i>					105	110	75-127			
<i>Toluene-d8</i>					101	103	80-127			
<i>4-Bromofluorobenzene</i>					93	94	78-125			



Date of Report: June 30, 2022  
Samples Submitted: June 22, 2022  
Laboratory Reference: 2206-240  
Project: 105474-050

**% MOISTURE**

<b>Client ID</b>	<b>Lab ID</b>	<b>% Moisture</b>	<b>Date Analyzed</b>
FL358-MW5-21.5-22.5	06-240-01	7	6-28-22
FL358-MW5-24.5-25.5	06-240-02	8	6-28-22
FL358-MW5-28-29	06-240-03	12	6-28-22
FL358-MW5-33-34	06-240-04	12	6-28-22
FL358-MW5-36-37	06-240-05	6	6-28-22
FL358-MW5-37-38	06-240-06	6	6-28-22
FL358-MW5A-23-24	06-240-07	6	6-28-22
FL358-MW5A-25-26	06-240-08	9	6-28-22





### Data Qualifiers and Abbreviations

- A - Due to a high sample concentration, the amount spiked is insufficient for meaningful MS/MSD recovery data.
  - B - The analyte indicated was also found in the blank sample.
  - C - The duplicate RPD is outside control limits due to high result variability when analyte concentrations are within five times the quantitation limit.
  - E - The value reported exceeds the quantitation range and is an estimate.
  - F - Surrogate recovery data is not available due to the high concentration of coeluting target compounds.
  - H - The analyte indicated is a common laboratory solvent and may have been introduced during sample preparation, and be impacting the sample result.
  - I - Compound recovery is outside of the control limits.
  - J - The value reported was below the practical quantitation limit. The value is an estimate.
  - K - Sample duplicate RPD is outside control limits due to sample inhomogeneity. The sample was re-extracted and re-analyzed with similar results.
  - L - The RPD is outside of the control limits.
  - M - Hydrocarbons in the gasoline range are impacting the diesel range result.
  - M1 - Hydrocarbons in the gasoline range (toluene-naphthalene) are present in the sample.
  - N - Hydrocarbons in the lube oil range are impacting the diesel range result.
  - N1 - Hydrocarbons in diesel range are impacting lube oil range results.
  - O - Hydrocarbons indicative of heavier fuels are present in the sample and are impacting the gasoline result.
  - P - The RPD of the detected concentrations between the two columns is greater than 40.
  - Q - Surrogate recovery is outside of the control limits.
  - S - Surrogate recovery data is not available due to the necessary dilution of the sample.
  - T - The sample chromatogram is not similar to a typical \_\_\_\_\_.
  - U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.
  - U1 - The practical quantitation limit is elevated due to interferences present in the sample.
  - V - Matrix Spike/Matrix Spike Duplicate recoveries are outside control limits due to matrix effects.
  - W - Matrix Spike/Matrix Spike Duplicate RPD are outside control limits due to matrix effects.
  - X - Sample extract treated with a mercury cleanup procedure.
  - X1 - Sample extract treated with a sulfuric acid/silica gel cleanup procedure.
  - X2 - Sample extract treated with a silica gel cleanup procedure.
  - Y - The calibration verification for this analyte exceeded the 20% drift specified in methods 8260 & 8270, and therefore the reported result should be considered an estimate. The overall performance of the calibration verification standard met the acceptance criteria of the method.
  - Y1 - Negative effects of the matrix from this sample on the instrument caused values for this analyte in the bracketing continuing calibration verification standard (CCVs) to be outside of 20% acceptance criteria. Because of this, quantitation limits and sample concentrations should be considered estimates.
  - Z -
- ND - Not Detected at PQL  
 PQL - Practical Quantitation Limit  
 RPD - Relative Percent Difference







14648 NE 95<sup>th</sup> Street, Redmond, WA 98052 • (425) 883-3881

July 11, 2022

Joseph Sawdey  
Shannon & Wilson, Inc.  
400 N 34th Street, Suite 100  
Seattle, WA 98103

Re: Analytical Data for Project 105474-050  
Laboratory Reference No. 2206-292

Dear Joseph:

Enclosed are the analytical results and associated quality control data for samples submitted on June 28, 2022.

The standard policy of OnSite Environmental, Inc. is to store your samples for 30 days from the date of receipt. If you require longer storage, please contact the laboratory.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning the data, or need additional information, please feel free to call me.

Sincerely,

A handwritten signature in black ink, appearing to read "DB", with a long horizontal flourish extending to the right.

David Baumeister  
Project Manager

Enclosures



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OnSite Environmental, Inc. 14648 NE 95<sup>th</sup> Street, Redmond, WA 98052 (425) 883-3881

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: July 11, 2022  
Samples Submitted: June 28, 2022  
Laboratory Reference: 2206-292  
Project: 105474-050

### Case Narrative

Samples were collected on June 27, 2022 and received by the laboratory on June 28, 2022. They were maintained at the laboratory at a temperature of 2°C to 6°C.

Please note that any and all soil sample results are reported on a dry-weight basis, unless otherwise noted below.

General QA/QC issues associated with the analytical data enclosed in this laboratory report will be indicated with a reference to a comment or explanation on the Data Qualifier page. More complex and involved QA/QC issues will be discussed in detail below.

#### Dissolved Gases RSK 175 Analysis

Sample FL358-MW11-220627 was chosen as the MS/MSD sample. The sample contained too much Methane to be able to report meaningful recovery results, an SB/SBD was analyzed and reported instead.

Any other QA/QC issues associated with this extraction and analysis will be indicated with a footnote reference and discussed in detail on the Data Qualifier page.



Date of Report: July 11, 2022  
 Samples Submitted: June 28, 2022  
 Laboratory Reference: 2206-292  
 Project: 105474-050

### VOLATILE ORGANICS EPA 8260D

Matrix: Water  
 Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>TB-220627</b>					
Laboratory ID:	06-292-01					
Vinyl Chloride	ND	0.20	EPA 8260D	6-29-22	6-29-22	
1,1-Dichloroethene	ND	0.20	EPA 8260D	6-29-22	6-29-22	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260D	6-29-22	6-29-22	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260D	6-29-22	6-29-22	
Trichloroethene	ND	0.20	EPA 8260D	6-29-22	6-29-22	
Tetrachloroethene	ND	0.20	EPA 8260D	6-29-22	6-29-22	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	97	75-127				
<i>Toluene-d8</i>	91	80-127				
<i>4-Bromofluorobenzene</i>	96	78-125				

<b>Client ID:</b>	<b>FL358-MW10-220627</b>					
Laboratory ID:	06-292-02					
Vinyl Chloride	0.22	0.20	EPA 8260D	6-29-22	6-29-22	
1,1-Dichloroethene	ND	0.20	EPA 8260D	6-29-22	6-29-22	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260D	6-29-22	6-29-22	
(cis) 1,2-Dichloroethene	7.6	0.20	EPA 8260D	6-29-22	6-29-22	
Trichloroethene	0.36	0.20	EPA 8260D	6-29-22	6-29-22	
Tetrachloroethene	ND	0.20	EPA 8260D	6-29-22	6-29-22	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	97	75-127				
<i>Toluene-d8</i>	92	80-127				
<i>4-Bromofluorobenzene</i>	97	78-125				

<b>Client ID:</b>	<b>FL358-MW11-220627</b>					
Laboratory ID:	06-292-03					
Vinyl Chloride	4.8	0.20	EPA 8260D	6-29-22	6-29-22	
1,1-Dichloroethene	ND	0.20	EPA 8260D	6-29-22	6-29-22	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260D	6-29-22	6-29-22	
(cis) 1,2-Dichloroethene	7.7	0.20	EPA 8260D	6-29-22	6-29-22	
Trichloroethene	ND	0.20	EPA 8260D	6-29-22	6-29-22	
Tetrachloroethene	ND	0.20	EPA 8260D	6-29-22	6-29-22	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	101	75-127				
<i>Toluene-d8</i>	93	80-127				
<i>4-Bromofluorobenzene</i>	98	78-125				



Date of Report: July 11, 2022  
 Samples Submitted: June 28, 2022  
 Laboratory Reference: 2206-292  
 Project: 105474-050

### VOLATILE ORGANICS EPA 8260D

Matrix: Water  
 Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>Rinsate-220627</b>					
Laboratory ID:	06-292-04					
Vinyl Chloride	ND	0.20	EPA 8260D	6-29-22	6-29-22	
1,1-Dichloroethene	ND	0.20	EPA 8260D	6-29-22	6-29-22	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260D	6-29-22	6-29-22	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260D	6-29-22	6-29-22	
Trichloroethene	ND	0.20	EPA 8260D	6-29-22	6-29-22	
Tetrachloroethene	ND	0.20	EPA 8260D	6-29-22	6-29-22	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	99	75-127				
<i>Toluene-d8</i>	92	80-127				
<i>4-Bromofluorobenzene</i>	99	78-125				



Date of Report: July 11, 2022  
 Samples Submitted: June 28, 2022  
 Laboratory Reference: 2206-292  
 Project: 105474-050

**VOLATILE ORGANICS EPA 8260D  
 QUALITY CONTROL**

Matrix: Water  
 Units: ug/L

<b>Analyte</b>	<b>Result</b>	<b>PQL</b>	<b>Method</b>	<b>Date Prepared</b>	<b>Date Analyzed</b>	<b>Flags</b>
<b>METHOD BLANK</b>						
Laboratory ID:	MB0629W2					
Vinyl Chloride	ND	0.20	EPA 8260D	6-29-22	6-29-22	
1,1-Dichloroethene	ND	0.20	EPA 8260D	6-29-22	6-29-22	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260D	6-29-22	6-29-22	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260D	6-29-22	6-29-22	
Trichloroethene	ND	0.20	EPA 8260D	6-29-22	6-29-22	
Tetrachloroethene	ND	0.20	EPA 8260D	6-29-22	6-29-22	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	95	75-127				
<i>Toluene-d8</i>	92	80-127				
<i>4-Bromofluorobenzene</i>	96	78-125				

<b>Analyte</b>	<b>Result</b>		<b>Spike Level</b>		<b>Source Result</b>	<b>Percent Recovery</b>		<b>Recovery Limits</b>	<b>RPD</b>	<b>RPD Limit</b>	<b>Flags</b>
<b>MATRIX SPIKES</b>											
Laboratory ID:	06-292-03										
	MS	MSD	MS	MSD		MS	MSD				
1,1-Dichloroethene	9.12	9.17	10.0	10.0	ND	91	92	76-124	1	15	
Benzene	9.13	9.14	10.0	10.0	ND	91	91	74-122	0	16	
Trichloroethene	9.58	9.54	10.0	10.0	ND	96	95	79-129	0	17	
Toluene	9.11	9.03	10.0	10.0	ND	91	90	80-120	1	19	
Chlorobenzene	11.1	11.0	10.0	10.0	ND	111	110	78-120	1	16	
<i>Surrogate:</i>											
<i>Dibromofluoromethane</i>						92	92	75-127			
<i>Toluene-d8</i>						94	92	80-127			
<i>4-Bromofluorobenzene</i>						106	104	78-125			



Date of Report: July 11, 2022  
 Samples Submitted: June 28, 2022  
 Laboratory Reference: 2206-292  
 Project: 105474-050

**AMMONIA (as Nitrogen)**  
**SM 4500-NH<sub>3</sub> D**

Matrix: Water  
 Units: mg/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>FL358-MW10-220627</b>					
Laboratory ID:	06-292-02					
Ammonia	<b>0.57</b>	0.20	SM 4500-NH3 D	7-8-22	7-8-22	

<b>Client ID:</b>	<b>FL358-MW11-220627</b>					
Laboratory ID:	06-292-03					
Ammonia	<b>2.8</b>	0.20	SM 4500-NH3 D	7-8-22	7-8-22	



Date of Report: July 11, 2022  
 Samples Submitted: June 28, 2022  
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 Project: 105474-050

**AMMONIA (as Nitrogen)  
 SM 4500-NH<sub>3</sub> D  
 QUALITY CONTROL**

Matrix: Water  
 Units: mg/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>METHOD BLANK</b>						
Laboratory ID:	MB0708W1					
Ammonia	<b>ND</b>	0.050	SM 4500-NH3 D	7-8-22	7-8-22	

Analyte	Result	Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
<b>DUPLICATE</b>								
Laboratory ID:	06-292-03							
	ORIG	DUP						
Ammonia	<b>2.83</b>	<b>2.86</b>	NA	NA	NA	1	15	

<b>MATRIX SPIKE</b>								
Laboratory ID:	06-292-03							
	MS	MS		MS				
Ammonia	<b>23.3</b>	20.0	2.83	102	87-110	NA	NA	

<b>SPIKE BLANK</b>								
Laboratory ID:	SB0708W1							
	SB	SB		SB				
Ammonia	<b>4.44</b>	5.00	NA	89	88-110	NA	NA	



Date of Report: July 11, 2022  
 Samples Submitted: June 28, 2022  
 Laboratory Reference: 2206-292  
 Project: 105474-050

**NITRITE (as Nitrogen)**  
**EPA 353.2**

Matrix: Water  
 Units: mg/L-N

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>FL358-MW10-220627</b>					
Laboratory ID:	06-292-02					
Nitrite	<b>ND</b>	0.020	EPA 353.2	6-28-22	6-28-22	

<b>Client ID:</b>	<b>FL358-MW11-220627</b>					
Laboratory ID:	06-292-03					
Nitrite	<b>ND</b>	0.020	EPA 353.2	6-28-22	6-28-22	



Date of Report: July 11, 2022  
 Samples Submitted: June 28, 2022  
 Laboratory Reference: 2206-292  
 Project: 105474-050

**NITRITE (as Nitrogen)**  
**EPA 353.2**  
**QUALITY CONTROL**

Matrix: Water  
 Units: mg/L-N

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>METHOD BLANK</b>						
Laboratory ID:	MB0628W2					
Nitrite	<b>ND</b>	0.020	EPA 353.2	6-28-22	6-28-22	

Analyte	Result	Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
<b>DUPLICATE</b>								
Laboratory ID:	06-292-03							
	ORIG	DUP						
Nitrite	<b>ND</b>	<b>ND</b>	NA	NA	NA	NA	11	

<b>MATRIX SPIKE</b>								
Laboratory ID:	06-292-03							
	MS	MS		MS				
Nitrite	<b>0.251</b>	0.250	ND	100	83-117	NA	NA	

<b>SPIKE BLANK</b>								
Laboratory ID:	SB0628W2							
	SB	SB		SB				
Nitrite	<b>0.246</b>	0.250	NA	98	91-112	NA	NA	



Date of Report: July 11, 2022  
 Samples Submitted: June 28, 2022  
 Laboratory Reference: 2206-292  
 Project: 105474-050

**NITRATE (as Nitrogen)**  
**EPA 353.2**

Matrix: Water  
 Units: mg/L-N

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>FL358-MW10-220627</b>					
Laboratory ID:	06-292-02					
Nitrate	<b>ND</b>	0.050	EPA 353.2	6-29-22	6-29-22	

<b>Client ID:</b>	<b>FL358-MW11-220627</b>					
Laboratory ID:	06-292-03					
Nitrate	<b>0.14</b>	0.050	EPA 353.2	6-29-22	6-29-22	



Date of Report: July 11, 2022  
 Samples Submitted: June 28, 2022  
 Laboratory Reference: 2206-292  
 Project: 105474-050

**NITRATE (as Nitrogen)**  
**EPA 353.2**  
**QUALITY CONTROL**

Matrix: Water  
 Units: mg/L-N

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>METHOD BLANK</b>						
Laboratory ID:	MB0629W1					
Nitrate	<b>ND</b>	0.050	EPA 353.2	6-29-22	6-29-22	

Analyte	Result	Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags	
<b>DUPLICATE</b>									
Laboratory ID:	06-292-03								
	ORIG	DUP							
Nitrate	<b>0.136</b>	<b>0.102</b>	NA	NA	NA	NA	29	10	C

<b>MATRIX SPIKE</b>								
Laboratory ID:	06-292-03							
	MS	MS		MS				
Nitrate	<b>2.11</b>	2.00	0.136	99	88-125	NA	NA	

<b>SPIKE BLANK</b>								
Laboratory ID:	SB0629W1							
	SB	SB		SB		0.3333		
Nitrate	<b>2.23</b>	2.00	NA	112	90-120	NA	NA	



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 Project: 105474-050

**TOTAL ORGANIC CARBON  
 SM 5310B**

Matrix: Water  
 Units: mg/L

<b>Analyte</b>	<b>Result</b>	<b>PQL</b>	<b>Method</b>	<b>Date Prepared</b>	<b>Date Analyzed</b>	<b>Flags</b>
<b>Client ID:</b>	<b>FL358-MW10-220627</b>					
Laboratory ID:	06-292-02					
Total Organic Carbon	<b>10</b>	1.0	SM 5310B	6-30-22	6-30-22	

<b>Client ID:</b>	<b>FL358-MW11-220627</b>					
Laboratory ID:	06-292-03					
Total Organic Carbon	<b>24</b>	1.0	SM 5310B	6-30-22	6-30-22	



Date of Report: July 11, 2022  
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 Project: 105474-050

**TOTAL ORGANIC CARBON  
 SM 5310B  
 QUALITY CONTROL**

Matrix: Water  
 Units: mg/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>METHOD BLANK</b>						
Laboratory ID:	MB0630W1					
Total Organic Carbon	<b>ND</b>	1.0	SM 5310B	6-30-22	6-30-22	

Analyte	Result	Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
<b>DUPLICATE</b>								
Laboratory ID:	06-292-03							
	ORIG	DUP						
Total Organic Carbon	<b>23.8</b>	<b>23.8</b>	NA	NA	NA	0	12	

<b>MATRIX SPIKE</b>								
Laboratory ID:	06-292-03							
	MS	MS		MS				
Total Organic Carbon	<b>33.4</b>	10.0	23.8	96	80-120	NA	NA	

<b>SPIKE BLANK</b>								
Laboratory ID:	SB0630W1							
	SB	SB		SB				
Total Organic Carbon	<b>10.1</b>	10.0	NA	101	80-118	NA	NA	



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**TOTAL IRON  
 EPA 6010D**

Matrix: Water  
 Units: ug/L (ppb)

<b>Analyte</b>	<b>Result</b>	<b>PQL</b>	<b>Method</b>	<b>Date Prepared</b>	<b>Date Analyzed</b>	<b>Flags</b>
<b>Client ID:</b>	<b>FL358-MW10-220627</b>					
Laboratory ID:	06-292-02					
Iron	<b>24000</b>	50	EPA 6010D	7-5-22	7-5-22	

<b>Client ID:</b>	<b>FL358-MW11-220627</b>					
Laboratory ID:	06-292-03					
Iron	<b>46000</b>	500	EPA 6010D	7-5-22	7-5-22	



Date of Report: July 11, 2022  
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**TOTAL IRON  
 EPA 6010D  
 QUALITY CONTROL**

Matrix: Water  
 Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>METHOD BLANK</b>						
Laboratory ID:	MB0705WH1					
Iron	<b>ND</b>	50	EPA 6010D	7-5-22	7-5-22	

Analyte	Result	Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
<b>DUPLICATE</b>								
Laboratory ID:	06-292-03							
	ORIG	DUP						
Iron	<b>46000</b>	<b>44500</b>	NA	NA	NA	3	20	

**MATRIX SPIKES**

Laboratory ID:	MS	MSD	MS	MSD	MS	MSD	RPD	RPD Limit	Flags	
Laboratory ID:	06-292-03									
	MS	MSD	MS	MSD	MS	MSD				
Iron	<b>65700</b>	<b>66800</b>	20000	20000	46000	<b>99</b>	<b>104</b>	75-125	2	20



Date of Report: July 11, 2022  
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 Laboratory Reference: 2206-292  
 Project: 105474-050

**DISSOLVED GASES  
 RSK 175**

Matrix: Water  
 Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>FL358-MW10-220627</b>					
Laboratory ID:	06-292-02					
Methane	<b>2700</b>	55	RSK 175	6-30-22	6-30-22	
Ethane	<b>ND</b>	0.22	RSK 175	6-30-22	6-30-22	
Ethene	<b>ND</b>	0.29	RSK 175	6-30-22	6-30-22	
Acetylene	<b>ND</b>	1.2	RSK 175	6-30-22	6-30-22	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>1-Butene</i>	<i>97</i>	<i>70-130</i>				

<b>Client ID:</b>	<b>FL358-MW11-220627</b>					
Laboratory ID:	06-292-03					
Methane	<b>2900</b>	28	RSK 175	6-30-22	6-30-22	
Ethane	<b>ND</b>	0.22	RSK 175	6-30-22	6-30-22	
Ethene	<b>ND</b>	0.29	RSK 175	6-30-22	6-30-22	
Acetylene	<b>ND</b>	1.2	RSK 175	6-30-22	6-30-22	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>1-Butene</i>	<i>91</i>	<i>70-130</i>				



Date of Report: July 11, 2022  
 Samples Submitted: June 28, 2022  
 Laboratory Reference: 2206-292  
 Project: 105474-050

**DISSOLVED GASES  
 RSK 175  
 QUALITY CONTROL**

Matrix: Water  
 Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>METHOD BLANK</b>						
Laboratory ID:	MB0630W1					
Methane	ND	0.55	RSK 175	6-30-22	6-30-22	
Ethane	ND	0.22	RSK 175	6-30-22	6-30-22	
Ethene	ND	0.29	RSK 175	6-30-22	6-30-22	
Acetylene	ND	1.2	RSK 175	6-30-22	6-30-22	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
1-Butene	104	70-130				

Analyte	Result		Spike Level		Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
<b>SPIKE BLANK</b>										
Laboratory ID:	SB0630W1									
	SB	SBD	SB	SBD	SB	SBD				
Methane	40.3	37.9	44.2	44.2	91	86	75-125	6	25	
Ethane	77.3	72.0	83.2	83.2	93	87	75-125	7	25	
Ethene	78.7	71.1	77.7	77.7	101	92	75-125	10	25	
Acetylene	57.9	53.8	72	72	80	75	75-125	7	25	I
<i>Surrogate:</i>										
1-Butene					96	87	70-130			





### Data Qualifiers and Abbreviations

- A - Due to a high sample concentration, the amount spiked is insufficient for meaningful MS/MSD recovery data.
  - B - The analyte indicated was also found in the blank sample.
  - C - The duplicate RPD is outside control limits due to high result variability when analyte concentrations are within five times the quantitation limit.
  - E - The value reported exceeds the quantitation range and is an estimate.
  - F - Surrogate recovery data is not available due to the high concentration of coeluting target compounds.
  - H - The analyte indicated is a common laboratory solvent and may have been introduced during sample preparation, and be impacting the sample result.
  - I - Compound recovery is outside of the control limits.
  - J - The value reported was below the practical quantitation limit. The value is an estimate.
  - K - Sample duplicate RPD is outside control limits due to sample inhomogeneity. The sample was re-extracted and re-analyzed with similar results.
  - L - The RPD is outside of the control limits.
  - M - Hydrocarbons in the gasoline range are impacting the diesel range result.
  - M1 - Hydrocarbons in the gasoline range (toluene-naphthalene) are present in the sample.
  - N - Hydrocarbons in the lube oil range are impacting the diesel range result.
  - N1 - Hydrocarbons in diesel range are impacting lube oil range results.
  - O - Hydrocarbons indicative of heavier fuels are present in the sample and are impacting the gasoline result.
  - P - The RPD of the detected concentrations between the two columns is greater than 40.
  - Q - Surrogate recovery is outside of the control limits.
  - S - Surrogate recovery data is not available due to the necessary dilution of the sample.
  - T - The sample chromatogram is not similar to a typical \_\_\_\_\_.
  - U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.
  - U1 - The practical quantitation limit is elevated due to interferences present in the sample.
  - V - Matrix Spike/Matrix Spike Duplicate recoveries are outside control limits due to matrix effects.
  - W - Matrix Spike/Matrix Spike Duplicate RPD are outside control limits due to matrix effects.
  - X - Sample extract treated with a mercury cleanup procedure.
  - X1 - Sample extract treated with a sulfuric acid/silica gel cleanup procedure.
  - X2 - Sample extract treated with a silica gel cleanup procedure.
  - Y - The calibration verification for this analyte exceeded the 20% drift specified in methods 8260 & 8270, and therefore the reported result should be considered an estimate. The overall performance of the calibration verification standard met the acceptance criteria of the method.
  - Y1 - Negative effects of the matrix from this sample on the instrument caused values for this analyte in the bracketing continuing calibration verification standard (CCVs) to be outside of 20% acceptance criteria. Because of this, quantitation limits and sample concentrations should be considered estimates.
  - Z -
- ND - Not Detected at PQL  
 PQL - Practical Quantitation Limit  
 RPD - Relative Percent Difference





Am Test Inc.  
13600 NE 126TH PL  
Suite C  
Kirkland, WA 98034  
(425) 885-1664

Professional  
Analytical  
Services

Jul 8 2022  
On-Site Environmental  
14648 NE 95th ST  
Redmond, WA 98052  
Attention: David Baumeister

Dear David Baumeister:

Enclosed please find the analytical data for your project.

The following is a cross correlation of client and laboratory identifications for your convenience.

CLIENT ID	MATRIX	AMTEST ID	TEST
FL358-MW10-220627	Water	22-A010961	DEM
FL358-MW11-220627	Water	22-A010962	DEM

Your samples were received on Tuesday, June 28, 2022. At the time of receipt, the samples were logged in and properly maintained prior to the subsequent analysis.

The analytical procedures used at AmTest are well documented and are typically derived from the protocols of the EPA, USDA, FDA or the Army Corps of Engineers.

Following the analytical data you will find the Quality Control (QC) results.

Please note that the detection limits that are listed in the body of the report refer to the Practical Quantitation Limits (PQL's), as opposed to the Method Detection Limits (MDL's).

If you should have any questions pertaining to the data package, please feel free to contact me.

Sincerely,

  
Aaron W. Young  
Vice President

Project #: 105474-050  
SDG #: 2224750

BACT = Bacteriological  
CONV = Conventional

MET = Metals  
ORG = Organics

NUT=Nutrients  
DEM=Demand

MIN=Minerals

Am Test Inc.  
13600 NE 126TH PL  
Suite C  
Kirkland, WA 98034  
(425) 885-1664  
www.amtestlab.com



Professional  
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Services

### ANALYSIS REPORT

On-Site Environmental  
14648 NE 95th ST  
Redmond, WA 98052  
Attention: David Baumeister  
SDG Number: 2224750  
Project #: 105474-050  
All results reported on an as received basis.

Date Received: 06/28/22  
Date Reported: 7/ 8/22

AMTEST Identification Number 22-A010961  
Client Identification FL358-MW10-220627  
Sampling Date 06/27/22, 12:30

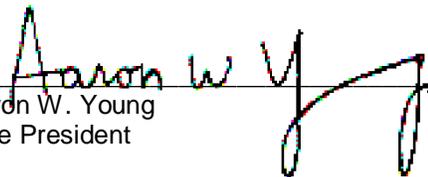
#### Demand

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
BOD	4.7	mg/l		2	SM 5210B	JM	06/29/22

AMTEST Identification Number 22-A010962  
Client Identification FL358-MW11-220627  
Sampling Date 06/27/22, 14:35

#### Demand

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
BOD	9.4	mg/l		2	SM 5210B	JM	06/29/22

  
Aaron W. Young  
Vice President

Am Test Inc.  
13600 NE 126th PL  
Suite C  
Kirkland, WA, 98034  
(425) 885-1664  
www.amtestlab.com



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**QC Summary for sample numbers: 22-A010961 to 22-A010962**

**DUPLICATES**

SAMPLE #	ANALYTE	UNITS	SAMPLE VALUE	DUP VALUE	RPD
22-A010979	BOD	mg/l	2.6	< 2	

**BLANKS**

ANALYTE	UNITS	RESULT
BOD	mg/l	< 2



14648 NE 95th Street, Redmond, WA 98052 · (425) 883-3881

Laboratory: AmTest Laboratories

Attention: Aaron Young

13600 NE 126th Pl Kirkland, WA 98034

Phone Number: (425) 885-1664

Turnaround Request

1 Day    2 Day    3 Day

Standard

Other: \_\_\_\_\_

Laboratory Reference #: 06-292

Project Manager: David Baumeister

email: [dbaumeister@onsite-env.com](mailto:dbaumeister@onsite-env.com)

Project Number: 105474-050

Project Name: \_\_\_\_\_

10961  
10962

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	# of Cont.	Requested Analyses
	FL358-MW10-220627	6/27/22	1230	W	1	BOD 5
	FL358-MW11-220627	6/27/22	1435	W	1	BOD 5

Relinquished by:	Company	Date	Time	Comments/Special Instructions
<i>[Signature]</i>	OSE	6/28/22	3:45pm	<b>EDDs</b>
<i>[Signature]</i>	AMTEST	6/28/22	19:45pm	
Relinquished by:				
Received by:				
Relinquished by:				
Received by:				

0.4

5.5°C



3600 Fremont Ave. N.  
Seattle, WA 98103  
T: (206) 352-3790  
F: (206) 352-7178  
info@fremontanalytical.com

**OnSite Environmental Inc**

David Baumeister  
14648 NE 95th Street  
Redmond, WA 98052

**RE: FL358 Monitoring Well**  
**Work Order Number: 2206458**

July 05, 2022

**Attention David Baumeister:**

Fremont Analytical, Inc. received 2 sample(s) on 6/28/2022 for the analyses presented in the following report.

***Ferrous Iron by SM3500-Fe B***

This report consists of the following:

- Case Narrative
- Analytical Results
- Applicable Quality Control Summary Reports
- Chain of Custody

All analyses were performed consistent with the Quality Assurance program of Fremont Analytical, Inc. Please contact the laboratory if you should have any questions about the results.

Thank you for using Fremont Analytical.

Sincerely,

Brianna Barnes  
Project Manager

*DoD-ELAP Accreditation #79636 by PJLA, ISO/IEC 17025:2017 and QSM 5.3 for Environmental Testing  
ORELAP Certification: WA 100009 (NELAP Recognized) for Environmental Testing  
Washington State Department of Ecology Accredited for Environmental Testing, Lab ID C910*

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Original



Date: 07/05/2022

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**CLIENT:** OnSite Environmental Inc  
**Project:** FL358 Monitoring Well  
**Work Order:** 2206458

## Work Order Sample Summary

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Lab Sample ID	Client Sample ID	Date/Time Collected	Date/Time Received
2206458-001	FL358-MW10-220627	06/27/2022 12:30 PM	06/28/2022 8:58 AM
2206458-002	FL358-MW11-220627	06/27/2022 2:35 PM	06/28/2022 8:58 AM

Note: If no "Time Collected" is supplied, a default of 12:00AM is assigned

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Original

**CLIENT:** OnSite Environmental Inc

**Project:** FL358 Monitoring Well

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**I. SAMPLE RECEIPT:**

Samples receipt information is recorded on the attached Sample Receipt Checklist.

**II. GENERAL REPORTING COMMENTS:**

Results are reported on a wet weight basis unless dry-weight correction is denoted in the units field on the analytical report ("mg/kg-dry" or "ug/kg-dry").

Matrix Spike (MS) and MS Duplicate (MSD) samples are tested from an analytical batch of "like" matrix to check for possible matrix effect. The MS and MSD will provide site specific matrix data only for those samples which are spiked by the laboratory. The sample chosen for spike purposes may or may not have been a sample submitted in this sample delivery group. The validity of the analytical procedures for which data is reported in this analytical report is determined by the Laboratory Control Sample (LCS) and the Method Blank (MB). The LCS and the MB are processed with the samples and the MS/MSD to ensure method criteria are achieved throughout the entire analytical process.

**III. ANALYSES AND EXCEPTIONS:**

Exceptions associated with this report will be footnoted in the analytical results page(s) or the quality control summary page(s) and/or noted below.

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Qualifiers:

- \* - Flagged value is not within established control limits
- B - Analyte detected in the associated Method Blank
- D - Dilution was required
- E - Value above quantitation range
- H - Holding times for preparation or analysis exceeded
- I - Analyte with an internal standard that does not meet established acceptance criteria
- J - Analyte detected below Reporting Limit
- N - Tentatively Identified Compound (TIC)
- Q - Analyte with an initial or continuing calibration that does not meet established acceptance criteria
- S - Spike recovery outside accepted recovery limits
- ND - Not detected at the Reporting Limit
- R - High relative percent difference observed

Acronyms:

- %Rec - Percent Recovery
- CCB - Continued Calibration Blank
- CCV - Continued Calibration Verification
- DF - Dilution Factor
- DUP - Sample Duplicate
- HEM - Hexane Extractable Material
- ICV - Initial Calibration Verification
- LCS/LCSD - Laboratory Control Sample / Laboratory Control Sample Duplicate
- MCL - Maximum Contaminant Level
- MB or MBLANK - Method Blank
- MDL - Method Detection Limit
- MS/MSD - Matrix Spike / Matrix Spike Duplicate
- PDS - Post Digestion Spike
- Ref Val - Reference Value
- REP - Sample Replicate
- RL - Reporting Limit
- RPD - Relative Percent Difference
- SD - Serial Dilution
- SGT - Silica Gel Treatment
- SPK - Spike
- Surr - Surrogate



**Client:** OnSite Environmental Inc

**Collection Date:** 6/27/2022 12:30:00 PM

**Project:** FL358 Monitoring Well

**Lab ID:** 2206458-001

**Matrix:** Water

**Client Sample ID:** FL358-MW10-220627

<b>Analyses</b>	<b>Result</b>	<b>RL</b>	<b>Qual</b>	<b>Units</b>	<b>DF</b>	<b>Date Analyzed</b>
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**Ferrous Iron by SM3500-Fe B**

Batch ID: R76503      Analyst: ALT

Ferrous Iron	29.3	2.50	D	mg/L	25	6/28/2022 11:17:00 AM
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**Client:** OnSite Environmental Inc

**Collection Date:** 6/27/2022 2:35:00 PM

**Project:** FL358 Monitoring Well

**Lab ID:** 2206458-002

**Matrix:** Water

**Client Sample ID:** FL358-MW11-220627

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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**Ferrous Iron by SM3500-Fe B**

Batch ID: R76503      Analyst: ALT

Ferrous Iron	55.5	12.5	D	mg/L	125	6/28/2022 11:17:00 AM
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**Work Order:** 2206458  
**CLIENT:** OnSite Environmental Inc  
**Project:** FL358 Monitoring Well

**QC SUMMARY REPORT**  
**Ferrous Iron by SM3500-Fe B**

Sample ID: <b>MB-R76503</b>	SampType: <b>MBLK</b>	Units: <b>mg/L</b>	Prep Date: <b>6/28/2022</b>	RunNo: <b>76503</b>							
Client ID: <b>MBLKW</b>	Batch ID: <b>R76503</b>	Analysis Date: <b>6/28/2022</b>	SeqNo: <b>1569681</b>								
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Ferrous Iron ND 0.100

Sample ID: <b>LCS-R76503</b>	SampType: <b>LCS</b>	Units: <b>mg/L</b>	Prep Date: <b>6/28/2022</b>	RunNo: <b>76503</b>							
Client ID: <b>LCSW</b>	Batch ID: <b>R76503</b>	Analysis Date: <b>6/28/2022</b>	SeqNo: <b>1569682</b>								
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Ferrous Iron 0.404 0.100 0.4000 0 101 85 115

Sample ID: <b>2206458-002ADUP</b>	SampType: <b>DUP</b>	Units: <b>mg/L</b>	Prep Date: <b>6/28/2022</b>	RunNo: <b>76503</b>							
Client ID: <b>FL358-MW11-220627</b>	Batch ID: <b>R76503</b>	Analysis Date: <b>6/28/2022</b>	SeqNo: <b>1569685</b>								
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Ferrous Iron 55.9 12.5 55.48 0.736 20 D

Sample ID: <b>2206458-002AMS</b>	SampType: <b>MS</b>	Units: <b>mg/L</b>	Prep Date: <b>6/28/2022</b>	RunNo: <b>76503</b>							
Client ID: <b>FL358-MW11-220627</b>	Batch ID: <b>R76503</b>	Analysis Date: <b>6/28/2022</b>	SeqNo: <b>1569686</b>								
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Ferrous Iron 117 12.5 50.00 55.48 124 70 130 D

Sample ID: <b>2206458-002AMSD</b>	SampType: <b>MSD</b>	Units: <b>mg/L</b>	Prep Date: <b>6/28/2022</b>	RunNo: <b>76503</b>							
Client ID: <b>FL358-MW11-220627</b>	Batch ID: <b>R76503</b>	Analysis Date: <b>6/28/2022</b>	SeqNo: <b>1569687</b>								
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Ferrous Iron 108 12.5 50.00 55.48 105 70 130 117.4 8.37 30 D

Client Name: ONSITE

Work Order Number: 2206458

Logged by: Elisabeth Samoray

Date Received: 6/28/2022 8:58:00 AM

### Chain of Custody

1. Is Chain of Custody complete? Yes  No  Not Present
2. How was the sample delivered? Courier

### Log In

3. Coolers are present? Yes  No  NA
4. Shipping container/cooler in good condition? Yes  No
5. Custody Seals present on shipping container/cooler?  
(Refer to comments for Custody Seals not intact) Yes  No  Not Present
6. Was an attempt made to cool the samples? Yes  No  NA
7. Were all items received at a temperature of >2°C to 6°C \* Yes  No  NA
8. Sample(s) in proper container(s)? Yes  No
9. Sufficient sample volume for indicated test(s)? Yes  No
10. Are samples properly preserved? Yes  No
11. Was preservative added to bottles? Yes  No  NA
12. Is there headspace in the VOA vials? Yes  No  NA
13. Did all samples containers arrive in good condition(unbroken)? Yes  No
14. Does paperwork match bottle labels? Yes  No
15. Are matrices correctly identified on Chain of Custody? Yes  No
16. Is it clear what analyses were requested? Yes  No
17. Were all holding times able to be met? Yes  No

### Special Handling (if applicable)

18. Was client notified of all discrepancies with this order? Yes  No  NA

Person Notified:	<input type="text"/>	Date:	<input type="text"/>
By Whom:	<input type="text"/>	Via:	<input type="checkbox"/> eMail <input type="checkbox"/> Phone <input type="checkbox"/> Fax <input type="checkbox"/> In Person
Regarding:	<input type="text"/>		
Client Instructions:	<input type="text"/>		

19. Additional remarks:

### Item Information

Item #	Temp °C
Sample 1	1.9

\* Note: DoD/ELAP and TNI require items to be received at 4°C +/- 2°C

FL358  
 Monitoring Well

# Chain of Custody

2206458

Company: Shannon & Wilson  
 Project Number: 105474-050  
 Project Name: FWLE Groundwater Monitoring  
 Project Manager: David Baumister  
 Sampled by: MRH & JXS

Turnaround Request (in working days)  
 (Check One)  
 Same Day     1 Day  
 2 Days     3 Days  
 Standard (7 Days)  
 Short hold time (other)

Laboratory Number:

Number of Containers	NWTPH-HCID	NWTPH-GX/BTEX (802) <input type="checkbox"/> 8260 <input type="checkbox"/>	NWTPH-GX	NWTPH-Dx (Acid / SG Clean-up) <input type="checkbox"/>	Volatiles 8260	Halogenated Volatiles 8260	EDB EPA 8011 (Waters Only)	Semivolatiles 8270/SIM (with low-level PAHs)	PAHs 8270/SIM (low-level)	PCBs 8082	Organochlorine Pesticides 8081	Organophosphorus Pesticides 8270/SIM	Chlorinated Acid Herbicides 8151	Total RCRA Metals	Total MTCA Metals	TCLP Metals	HEM (oil and grease) 1664	Ferrous Iron SH3500	% Moisture
1																		X	
1																		X	

Lab ID	Sample Identification	Date		Matrix
		Sampled	Time Sampled	
	FL358-MW10-220627	6/27/22	1230	Water
	FL358-MW11-220627	↓	1435	↓

Signature	Company	Date	Time	Comments/Special Instructions
<u>m HTH</u>	<u>SWI</u>	<u>6/28/22</u>	<u>0800</u>	
<u>J. Isaacson</u>	<u>ALPHA</u>	<u>6/28/22</u>	<u>0800</u>	
<u>J. Isaacson</u>	<u>ALPHA</u>	<u>6/28/22</u>	<u>0847</u>	
<u>C.</u>	<u>FAI</u>	<u>6/28/22</u>	<u>0658</u>	

Reviewed/Date: \_\_\_\_\_ Reviewed/Date: \_\_\_\_\_

Data Package: Standard  Level III  Level IV

Chromatograms with final report  Electronic Data Deliverables (EDDs)

*FL358 Monitoring Wells*

# Chain of Custody

Company: *Shannon & Wilson*  
 Project Number: *105474-050*  
 Project Name: ~~*FAVE Groundwater Monitoring*~~  
 Project Manager: *Joseph Sawdey*  
 Sampled by: *MRH & JXS*

**Turnaround Request (in working days)**

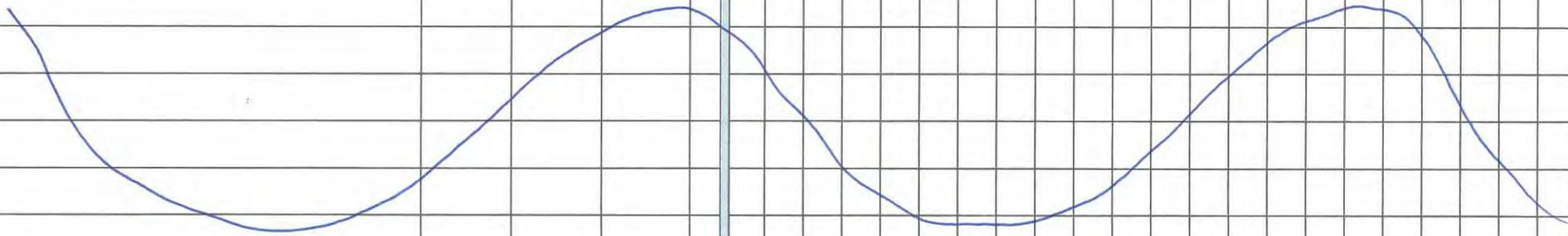
(Check One)

Same Day     1 Day  
 2 Days     3 Days  
 Standard (7 Days)  
 \_\_\_\_\_ (other)

Laboratory Number: **06-292**

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers
1	TB-220627	6/27/22	0000	Water	1
2	FL358-MW10-220627	↓	1230	↓	9
3	FL358-MW11-220627	↓	1435	↓	15
4	Rinsate-220627	↓	1555	↓	3

NWTPH-HCID	NWTPH-Gx/BTEX (8021 <input type="checkbox"/> 8260 <input type="checkbox"/> )	NWTPH-Gx	NWTPH-Dx (Acid / SG Clean-up <input type="checkbox"/> )	Volatiles 8260	Halogenated Volatiles 8260	EDB EPA 8011 (Waters Only)	Semivolatiles 8270/SIM (with low-level PAHs)	PAHs 8270/SIM (low-level)	PCBs 8082	Organochlorine Pesticides 8081	Organophosphorus Pesticides 8270/SIM	Chlorinated Acid Herbicides 8151	Total RCRA Metals	Total MTCA Metals	TCLP Metals	HEM (lead-grease) test	Ferrous Iron	Ammonia, Nitrite, Nitrate	TDC by SM5310B	BOD by SM5210B	TOTAL Iron by EPA6010	PC-Metals Dissolved gases by ESK175
					X												X	X	X	X	X	X
					X												X	X	X	X	X	X
					X												X	X	X	X	X	X



Signature	Company	Date	Time	Comments/Special Instructions
<i>M. Wilson</i>	<i>SWI</i>	<i>6/28/22</i>	<i>0800</i>	<i>Extra volume from FL358-MW11</i>
<i>J. Swanson</i>	<i>ALPHA</i>	<i>6/28/22</i>	<i>0800</i>	<i>for MS/MSD *Subbed directly to Fremont Analytical.</i>
<i>J. Swanson</i>	<i>ALPHA</i>	<i>6/28/22</i>	<i>12:14</i>	<i>HVOCs = PCE, TCE, cis- and trans-1,2-DCE, 1,1-DCE, and VC. Target reporting limit = 0.2 ug/L.</i>
<i>J. Swanson</i>	<i>ALPHA</i>	<i>6/28/22</i>	<i>1220</i>	
				Data Package: Standard <input type="checkbox"/> Level III <input type="checkbox"/> Level IV <input type="checkbox"/>
				Chromatograms with final report <input type="checkbox"/> Electronic Data Deliverables (EDDs) <input type="checkbox"/>



14648 NE 95<sup>th</sup> Street, Redmond, WA 98052 • (425) 883-3881

July 14, 2022

Joseph Sawdey  
Shannon & Wilson, Inc.  
400 N 34th Street, Suite 100  
Seattle, WA 98103

Re: Analytical Data for Project 105474-050  
Laboratory Reference No. 2206-308

Dear Joseph:

Enclosed are the analytical results and associated quality control data for samples submitted on June 29, 2022.

The standard policy of OnSite Environmental, Inc. is to store your samples for 30 days from the date of receipt. If you require longer storage, please contact the laboratory.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning the data, or need additional information, please feel free to call me.

Sincerely,

A handwritten signature in black ink, appearing to read "DB", with a long horizontal flourish extending to the right.

David Baumeister  
Project Manager

Enclosures



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OnSite Environmental, Inc. 14648 NE 95<sup>th</sup> Street, Redmond, WA 98052 (425) 883-3881

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: July 14, 2022  
Samples Submitted: June 29, 2022  
Laboratory Reference: 2206-308  
Project: 105474-050

### Case Narrative

Samples were collected on June 28, 2022 and received by the laboratory on June 29, 2022. They were maintained at the laboratory at a temperature of 2°C to 6°C.

Please note that any and all soil sample results are reported on a dry-weight basis, unless otherwise noted below.

General QA/QC issues associated with the analytical data enclosed in this laboratory report will be indicated with a reference to a comment or explanation on the Data Qualifier page. More complex and involved QA/QC issues will be discussed in detail below.

#### Dissolved Gases RSK 175 Analysis

Samples FL358-MW9-220628 and FL358-MW100-220628 had a surrogate recovery outside of laboratory control limits. The samples were re-run with similar results, indicating probable matrix interference.

Due to the high concentration of Methane in the native sample used for the MS/MSD, meaningful recovery data for this compound could not be obtained. In the MS sample, Acetylene was recovered below laboratory control limits. Please note that proper statistical control limits for this compound are still being developed, therefore this should not be considered a true quality control failure. A SB/SBD analyzed with this set had all parameters fall within control limits.

Any other QA/QC issues associated with this extraction and analysis will be indicated with a footnote reference and discussed in detail on the Data Qualifier page.



Date of Report: July 14, 2022  
 Samples Submitted: June 29, 2022  
 Laboratory Reference: 2206-308  
 Project: 105474-050

### VOLATILE ORGANICS EPA 8260D

Matrix: Water  
 Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>TB-220628</b>					
Laboratory ID:	06-308-01					
Vinyl Chloride	ND	0.20	EPA 8260D	6-30-22	6-30-22	
1,1-Dichloroethene	ND	0.20	EPA 8260D	6-30-22	6-30-22	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260D	6-30-22	6-30-22	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260D	6-30-22	6-30-22	
Trichloroethene	ND	0.20	EPA 8260D	6-30-22	6-30-22	
Tetrachloroethene	ND	0.20	EPA 8260D	6-30-22	6-30-22	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	90	75-127				
<i>Toluene-d8</i>	92	80-127				
<i>4-Bromofluorobenzene</i>	94	78-125				

<b>Client ID:</b>	<b>FL358-MW13-220628</b>					
Laboratory ID:	06-308-02					
Vinyl Chloride	ND	0.20	EPA 8260D	6-30-22	6-30-22	
1,1-Dichloroethene	ND	0.20	EPA 8260D	6-30-22	6-30-22	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260D	6-30-22	6-30-22	
(cis) 1,2-Dichloroethene	4.3	0.20	EPA 8260D	6-30-22	6-30-22	
Trichloroethene	2.9	0.20	EPA 8260D	6-30-22	6-30-22	
Tetrachloroethene	8.0	0.20	EPA 8260D	6-30-22	6-30-22	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	89	75-127				
<i>Toluene-d8</i>	91	80-127				
<i>4-Bromofluorobenzene</i>	93	78-125				

<b>Client ID:</b>	<b>FL358-MW8-220628</b>					
Laboratory ID:	06-308-03					
Vinyl Chloride	ND	0.20	EPA 8260D	6-30-22	6-30-22	
1,1-Dichloroethene	ND	0.20	EPA 8260D	6-30-22	6-30-22	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260D	6-30-22	6-30-22	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260D	6-30-22	6-30-22	
Trichloroethene	ND	0.20	EPA 8260D	6-30-22	6-30-22	
Tetrachloroethene	ND	0.20	EPA 8260D	6-30-22	6-30-22	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	90	75-127				
<i>Toluene-d8</i>	90	80-127				
<i>4-Bromofluorobenzene</i>	91	78-125				



Date of Report: July 14, 2022  
 Samples Submitted: June 29, 2022  
 Laboratory Reference: 2206-308  
 Project: 105474-050

### VOLATILE ORGANICS EPA 8260D

Matrix: Water  
 Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>FL358-MW9-220628</b>					
Laboratory ID:	06-308-04					
Vinyl Chloride	ND	0.20	EPA 8260D	6-30-22	6-30-22	
1,1-Dichloroethene	ND	0.20	EPA 8260D	6-30-22	6-30-22	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260D	6-30-22	6-30-22	
(cis) 1,2-Dichloroethene	2.6	0.20	EPA 8260D	6-30-22	6-30-22	
Trichloroethene	2.6	0.20	EPA 8260D	6-30-22	6-30-22	
Tetrachloroethene	0.87	0.20	EPA 8260D	6-30-22	6-30-22	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	90	75-127				
<i>Toluene-d8</i>	90	80-127				
<i>4-Bromofluorobenzene</i>	93	78-125				

<b>Client ID:</b>	<b>FL358-MW100-220628</b>					
Laboratory ID:	06-308-05					
Vinyl Chloride	ND	0.20	EPA 8260D	6-30-22	6-30-22	
1,1-Dichloroethene	ND	0.20	EPA 8260D	6-30-22	6-30-22	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260D	6-30-22	6-30-22	
(cis) 1,2-Dichloroethene	1.8	0.20	EPA 8260D	6-30-22	6-30-22	
Trichloroethene	1.8	0.20	EPA 8260D	6-30-22	6-30-22	
Tetrachloroethene	0.58	0.20	EPA 8260D	6-30-22	6-30-22	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	93	75-127				
<i>Toluene-d8</i>	92	80-127				
<i>4-Bromofluorobenzene</i>	95	78-125				

<b>Client ID:</b>	<b>Rinsate-220628</b>					
Laboratory ID:	06-308-06					
Vinyl Chloride	ND	0.20	EPA 8260D	6-30-22	6-30-22	
1,1-Dichloroethene	ND	0.20	EPA 8260D	6-30-22	6-30-22	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260D	6-30-22	6-30-22	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260D	6-30-22	6-30-22	
Trichloroethene	ND	0.20	EPA 8260D	6-30-22	6-30-22	
Tetrachloroethene	0.22	0.20	EPA 8260D	6-30-22	6-30-22	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	90	75-127				
<i>Toluene-d8</i>	92	80-127				
<i>4-Bromofluorobenzene</i>	94	78-125				



Date of Report: July 14, 2022  
 Samples Submitted: June 29, 2022  
 Laboratory Reference: 2206-308  
 Project: 105474-050

**VOLATILE ORGANICS EPA 8260D  
 QUALITY CONTROL**

Matrix: Water  
 Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>METHOD BLANK</b>						
Laboratory ID:	MB0630W1					
Vinyl Chloride	ND	0.20	EPA 8260D	6-30-22	6-30-22	
1,1-Dichloroethene	ND	0.20	EPA 8260D	6-30-22	6-30-22	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260D	6-30-22	6-30-22	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260D	6-30-22	6-30-22	
Trichloroethene	ND	0.20	EPA 8260D	6-30-22	6-30-22	
Tetrachloroethene	ND	0.20	EPA 8260D	6-30-22	6-30-22	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	86	75-127				
<i>Toluene-d8</i>	91	80-127				
<i>4-Bromofluorobenzene</i>	91	78-125				

Analyte	Result		Spike Level		Source Result	Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
<b>MATRIX SPIKES</b>											
Laboratory ID:	06-308-03										
	MS	MSD	MS	MSD		MS	MSD				
1,1-Dichloroethene	<b>8.61</b>	<b>8.75</b>	10.0	10.0	ND	86	88	76-124	2	15	
Benzene	<b>8.89</b>	<b>9.00</b>	10.0	10.0	ND	89	90	74-122	1	16	
Trichloroethene	<b>9.26</b>	<b>9.31</b>	10.0	10.0	ND	93	93	79-129	1	17	
Toluene	<b>8.90</b>	<b>8.99</b>	10.0	10.0	ND	89	90	80-120	1	19	
Chlorobenzene	<b>10.9</b>	<b>10.7</b>	10.0	10.0	ND	109	107	78-120	2	16	
<i>Surrogate:</i>											
<i>Dibromofluoromethane</i>						97	98	75-127			
<i>Toluene-d8</i>						93	94	80-127			
<i>4-Bromofluorobenzene</i>						112	110	78-125			



Date of Report: July 14, 2022  
 Samples Submitted: June 29, 2022  
 Laboratory Reference: 2206-308  
 Project: 105474-050

**AMMONIA (as Nitrogen)**  
**SM 4500-NH<sub>3</sub> D**

Matrix: Water  
 Units: mg/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>FL358-MW13-220628</b>					
Laboratory ID:	06-308-02					
Ammonia	<b>ND</b>	0.050	SM 4500-NH3 D	7-8-22	7-8-22	

<b>Client ID:</b>	<b>FL358-MW8-220628</b>					
Laboratory ID:	06-308-03					
Ammonia	<b>ND</b>	0.050	SM 4500-NH3 D	7-8-22	7-8-22	

<b>Client ID:</b>	<b>FL358-MW9-220628</b>					
Laboratory ID:	06-308-04					
Ammonia	<b>1.3</b>	0.050	SM 4500-NH3 D	7-8-22	7-8-22	

<b>Client ID:</b>	<b>FL358-MW100-220628</b>					
Laboratory ID:	06-308-05					
Ammonia	<b>1.4</b>	0.050	SM 4500-NH3 D	7-8-22	7-8-22	



Date of Report: July 14, 2022  
 Samples Submitted: June 29, 2022  
 Laboratory Reference: 2206-308  
 Project: 105474-050

**AMMONIA (as Nitrogen)  
 SM 4500-NH<sub>3</sub> D  
 QUALITY CONTROL**

Matrix: Water  
 Units: mg/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>METHOD BLANK</b>						
Laboratory ID:	MB0708W2					
Ammonia	ND	0.050	SM 4500-NH3 D	7-8-22	7-8-22	

Analyte	Result	Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
<b>DUPLICATE</b>								
Laboratory ID:	06-308-03							
	ORIG	DUP						
Ammonia	ND	ND	NA	NA	NA	NA	15	

<b>MATRIX SPIKE</b>								
Laboratory ID:	06-308-03							
	MS	MS		MS				
Ammonia	4.68	5.00	ND	94	87-110	NA	NA	

<b>SPIKE BLANK</b>								
Laboratory ID:	SB0708W2							
	SB	SB		SB				
Ammonia	5.17	5.00	NA	103	88-110	NA	NA	



Date of Report: July 14, 2022  
 Samples Submitted: June 29, 2022  
 Laboratory Reference: 2206-308  
 Project: 105474-050

**NITRATE (as Nitrogen)**  
**EPA 353.2**

Matrix: Water  
 Units: mg/L-N

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>FL358-MW13-220628</b>					
Laboratory ID:	06-308-02					
Nitrate	<b>ND</b>	0.050	EPA 353.2	6-30-22	6-30-22	

<b>Client ID:</b>	<b>FL358-MW8-220628</b>					
Laboratory ID:	06-308-03					
Nitrate	<b>ND</b>	0.050	EPA 353.2	6-30-22	6-30-22	

<b>Client ID:</b>	<b>FL358-MW9-220628</b>					
Laboratory ID:	06-308-04					
Nitrate	<b>ND</b>	0.050	EPA 353.2	6-30-22	6-30-22	

<b>Client ID:</b>	<b>FL358-MW100-220628</b>					
Laboratory ID:	06-308-05					
Nitrate	<b>ND</b>	0.050	EPA 353.2	6-30-22	6-30-22	



Date of Report: July 14, 2022  
 Samples Submitted: June 29, 2022  
 Laboratory Reference: 2206-308  
 Project: 105474-050

**NITRATE (as Nitrogen)  
 EPA 353.2  
 QUALITY CONTROL**

Matrix: Water  
 Units: mg/L-N

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>METHOD BLANK</b>						
Laboratory ID:	MB0630W1					
Nitrate	<b>ND</b>	0.050	EPA 353.2	6-30-22	6-30-22	

Analyte	Result	Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
<b>DUPLICATE</b>								
Laboratory ID:	06-308-03							
	ORIG	DUP						
Nitrate	<b>ND</b>	<b>ND</b>	NA	NA	NA	NA	10	

<b>MATRIX SPIKE</b>								
Laboratory ID:	06-308-03							
	MS	MS		MS				
Nitrate	<b>2.12</b>	2.00	ND	106	88-125	NA	NA	

<b>SPIKE BLANK</b>								
Laboratory ID:	SB0630W1							
	SB	SB		SB				
Nitrate	<b>2.26</b>	2.00	NA	113	90-120	NA	NA	



Date of Report: July 14, 2022  
 Samples Submitted: June 29, 2022  
 Laboratory Reference: 2206-308  
 Project: 105474-050

**NITRITE (as Nitrogen)**  
**EPA 353.2**

Matrix: Water  
 Units: mg/L-N

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>FL358-MW13-220628</b>					
Laboratory ID:	06-308-02					
Nitrite	<b>ND</b>	0.020	EPA 353.2	6-30-22	6-30-22	

<b>Client ID:</b>	<b>FL358-MW8-220628</b>					
Laboratory ID:	06-308-03					
Nitrite	<b>ND</b>	0.020	EPA 353.2	6-30-22	6-30-22	

<b>Client ID:</b>	<b>FL358-MW9-220628</b>					
Laboratory ID:	06-308-04					
Nitrite	<b>ND</b>	0.020	EPA 353.2	6-30-22	6-30-22	

<b>Client ID:</b>	<b>FL358-MW100-220628</b>					
Laboratory ID:	06-308-05					
Nitrite	<b>ND</b>	0.020	EPA 353.2	6-30-22	6-30-22	



Date of Report: July 14, 2022  
 Samples Submitted: June 29, 2022  
 Laboratory Reference: 2206-308  
 Project: 105474-050

**NITRITE (as Nitrogen)  
 EPA 353.2  
 QUALITY CONTROL**

Matrix: Water  
 Units: mg/L-N

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>METHOD BLANK</b>						
Laboratory ID:	MB0630W1					
Nitrite	ND	0.020	EPA 353.2	6-30-22	6-30-22	

Analyte	Result	Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
<b>DUPLICATE</b>								
Laboratory ID:	06-308-03							
	ORIG	DUP						
Nitrite	ND	ND	NA	NA	NA	NA	11	

<b>MATRIX SPIKE</b>								
Laboratory ID:	06-308-03							
	MS	MS		MS				
Nitrite	0.254	0.250	ND	102	83-117	NA	NA	

<b>SPIKE BLANK</b>								
Laboratory ID:	SB0630W1							
	SB	SB		SB				
Nitrite	0.251	0.250	NA	100	91-112	NA	NA	



Date of Report: July 14, 2022  
 Samples Submitted: June 29, 2022  
 Laboratory Reference: 2206-308  
 Project: 105474-050

**TOTAL ORGANIC CARBON  
 SM 5310B**

Matrix: Water  
 Units: mg/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>FL358-MW13-220628</b>					
Laboratory ID:	06-308-02					
Total Organic Carbon	<b>7.5</b>	1.0	SM 5310B	7-12-22	7-12-22	

<b>Client ID:</b>	<b>FL358-MW8-220628</b>					
Laboratory ID:	06-308-03					
Total Organic Carbon	<b>4.4</b>	1.0	SM 5310B	7-12-22	7-12-22	

<b>Client ID:</b>	<b>FL358-MW9-220628</b>					
Laboratory ID:	06-308-04					
Total Organic Carbon	<b>13</b>	1.0	SM 5310B	7-12-22	7-12-22	

<b>Client ID:</b>	<b>FL358-MW100-220628</b>					
Laboratory ID:	06-308-05					
Total Organic Carbon	<b>13</b>	1.0	SM 5310B	7-12-22	7-12-22	



Date of Report: July 14, 2022  
 Samples Submitted: June 29, 2022  
 Laboratory Reference: 2206-308  
 Project: 105474-050

**TOTAL ORGANIC CARBON  
 SM 5310B  
 QUALITY CONTROL**

Matrix: Water  
 Units: mg/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>METHOD BLANK</b>						
Laboratory ID:	MB0712W2					
Total Organic Carbon	<b>ND</b>	1.0	SM 5310B	7-12-22	7-12-22	

Analyte	Result	Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
<b>DUPLICATE</b>								
Laboratory ID:	06-308-03							
	ORIG	DUP						
Total Organic Carbon	<b>4.40</b>	<b>4.45</b>	NA	NA	NA	1	12	

<b>MATRIX SPIKE</b>								
Laboratory ID:	06-308-03							
	MS	MS		MS				
Total Organic Carbon	<b>13.9</b>		10.0	4.40	95	80-120	NA	NA

<b>SPIKE BLANK</b>								
Laboratory ID:	SB0712W2							
	SB	SB		SB				
Total Organic Carbon	<b>9.82</b>		10.0	NA	98	80-118	NA	NA



Date of Report: July 14, 2022  
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 Laboratory Reference: 2206-308  
 Project: 105474-050

**TOTAL METALS  
 EPA 6010D**

Matrix: Water  
 Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>FL358-MW13-220628</b>					
Laboratory ID:	06-308-02					
Iron	<b>2200</b>	50	EPA 6010D	7-5-22	7-5-22	

<b>Client ID:</b>	<b>FL358-MW8-220628</b>					
Laboratory ID:	06-308-03					
Iron	<b>330</b>	50	EPA 6010D	7-5-22	7-5-22	

<b>Client ID:</b>	<b>FL358-MW9-220628</b>					
Laboratory ID:	06-308-04					
Iron	<b>59000</b>	500	EPA 6010D	7-5-22	7-5-22	

<b>Client ID:</b>	<b>FL358-MW100-220628</b>					
Laboratory ID:	06-308-05					
Iron	<b>57000</b>	500	EPA 6010D	7-5-22	7-5-22	



Date of Report: July 14, 2022  
 Samples Submitted: June 29, 2022  
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**TOTAL METALS  
 EPA 6010D  
 QUALITY CONTROL**

Matrix: Water  
 Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>METHOD BLANK</b>						
Laboratory ID:	MB0705WH1					
Iron	<b>ND</b>	50	EPA 6010D	7-5-22	7-5-22	

Analyte	Result	Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
<b>DUPLICATE</b>								
Laboratory ID:	06-292-03							
	ORIG	DUP						
Iron	<b>46000</b>	<b>44500</b>	NA	NA	NA	NA	3	20

**MATRIX SPIKES**

Laboratory ID:	06-292-03									
	MS	MSD	MS	MSD	MS	MSD				
Iron	<b>65700</b>	<b>66800</b>	20000	20000	46000	<b>99</b>	<b>104</b>	75-125	2	20



Date of Report: July 14, 2022  
 Samples Submitted: June 29, 2022  
 Laboratory Reference: 2206-308  
 Project: 105474-050

**DISSOLVED GASES  
RSK 175**

Matrix: Water  
 Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>FL358-MW13-220628</b>					
Laboratory ID:	06-308-02					
Methane	<b>41</b>	0.55	RSK 175	7-1-22	7-1-22	
Ethane	<b>ND</b>	0.22	RSK 175	7-1-22	7-1-22	
Ethene	<b>ND</b>	0.29	RSK 175	7-1-22	7-1-22	
Acetylene	<b>ND</b>	1.2	RSK 175	7-1-22	7-1-22	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
1-Butene	97	70-130				

<b>Client ID:</b>	<b>FL358-MW8-220628</b>					
Laboratory ID:	06-308-03					
Methane	<b>170</b>	1.1	RSK 175	7-1-22	7-1-22	
Ethane	<b>ND</b>	0.22	RSK 175	7-1-22	7-1-22	
Ethene	<b>ND</b>	0.29	RSK 175	7-1-22	7-1-22	
Acetylene	<b>ND</b>	1.2	RSK 175	7-1-22	7-1-22	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
1-Butene	75	70-130				

<b>Client ID:</b>	<b>FL358-MW9-220628</b>					
Laboratory ID:	06-308-04					
Methane	<b>6100</b>	55	RSK 175	7-1-22	7-1-22	
Ethane	<b>ND</b>	0.22	RSK 175	7-1-22	7-1-22	
Ethene	<b>ND</b>	0.29	RSK 175	7-1-22	7-1-22	
Acetylene	<b>ND</b>	1.2	RSK 175	7-1-22	7-1-22	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
1-Butene	63	70-130				

Q

<b>Client ID:</b>	<b>FL358-MW100-220628</b>					
Laboratory ID:	06-308-05					
Methane	<b>5300</b>	55	RSK 175	7-1-22	7-1-22	
Ethane	<b>ND</b>	0.22	RSK 175	7-1-22	7-1-22	
Ethene	<b>ND</b>	0.29	RSK 175	7-1-22	7-1-22	
Acetylene	<b>ND</b>	1.2	RSK 175	7-1-22	7-1-22	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
1-Butene	65	70-130				

Q



Date of Report: July 14, 2022  
 Samples Submitted: June 29, 2022  
 Laboratory Reference: 2206-308  
 Project: 105474-050

**DISSOLVED GASES  
 RSK 175  
 QUALITY CONTROL**

Matrix: Water  
 Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>METHOD BLANK</b>						
Laboratory ID:	MB0701W1					
Methane	ND	0.55	RSK 175	7-1-22	7-1-22	
Ethane	ND	0.22	RSK 175	7-1-22	7-1-22	
Ethene	ND	0.29	RSK 175	7-1-22	7-1-22	
Acetylene	ND	1.2	RSK 175	7-1-22	7-1-22	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
1-Butene	91	70-130				

Analyte	Result		Spike Level		Source Result	Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
<b>MATRIX SPIKES</b>											
Laboratory ID:	06-308-03										
	MS	MSD	MS	MSD		MS	MSD				
Methane	111	111	44.2	44.2	169	NA	NA	75-125	0	25	A,A
Ethane	80.2	80.8	83.2	83.2	ND	96	97	75-125	1	25	
Ethene	73.4	74.5	77.7	77.7	ND	95	96	75-125	1	25	
Acetylene	52.7	54.2	72	72	ND	73	75	75-125	3	25	V
<i>Surrogate:</i>											
1-Butene						84	86	70-130			





### Data Qualifiers and Abbreviations

- A - Due to a high sample concentration, the amount spiked is insufficient for meaningful MS/MSD recovery data.
  - B - The analyte indicated was also found in the blank sample.
  - C - The duplicate RPD is outside control limits due to high result variability when analyte concentrations are within five times the quantitation limit.
  - E - The value reported exceeds the quantitation range and is an estimate.
  - F - Surrogate recovery data is not available due to the high concentration of coeluting target compounds.
  - H - The analyte indicated is a common laboratory solvent and may have been introduced during sample preparation, and be impacting the sample result.
  - I - Compound recovery is outside of the control limits.
  - J - The value reported was below the practical quantitation limit. The value is an estimate.
  - K - Sample duplicate RPD is outside control limits due to sample inhomogeneity. The sample was re-extracted and re-analyzed with similar results.
  - L - The RPD is outside of the control limits.
  - M - Hydrocarbons in the gasoline range are impacting the diesel range result.
  - M1 - Hydrocarbons in the gasoline range (toluene-naphthalene) are present in the sample.
  - N - Hydrocarbons in the lube oil range are impacting the diesel range result.
  - N1 - Hydrocarbons in diesel range are impacting lube oil range results.
  - O - Hydrocarbons indicative of heavier fuels are present in the sample and are impacting the gasoline result.
  - P - The RPD of the detected concentrations between the two columns is greater than 40.
  - Q - Surrogate recovery is outside of the control limits.
  - S - Surrogate recovery data is not available due to the necessary dilution of the sample.
  - T - The sample chromatogram is not similar to a typical \_\_\_\_\_.
  - U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.
  - U1 - The practical quantitation limit is elevated due to interferences present in the sample.
  - V - Matrix Spike/Matrix Spike Duplicate recoveries are outside control limits due to matrix effects.
  - W - Matrix Spike/Matrix Spike Duplicate RPD are outside control limits due to matrix effects.
  - X - Sample extract treated with a mercury cleanup procedure.
  - X1 - Sample extract treated with a sulfuric acid/silica gel cleanup procedure.
  - X2 - Sample extract treated with a silica gel cleanup procedure.
  - Y - The calibration verification for this analyte exceeded the 20% drift specified in methods 8260 & 8270, and therefore the reported result should be considered an estimate. The overall performance of the calibration verification standard met the acceptance criteria of the method.
  - Y1 - Negative effects of the matrix from this sample on the instrument caused values for this analyte in the bracketing continuing calibration verification standard (CCVs) to be outside of 20% acceptance criteria. Because of this, quantitation limits and sample concentrations should be considered estimates.
  - Z -
- ND - Not Detected at PQL  
 PQL - Practical Quantitation Limit  
 RPD - Relative Percent Difference



**Am Test Inc.**  
13600 NE 126TH PL  
Suite C  
Kirkland, WA 98034  
(425) 885-1664

*Professional  
Analytical  
Services*

Jul 8 2022  
On-Site Environmental  
14648 NE 95th ST  
Redmond, WA 98052  
Attention: David Baumeister

Dear David Baumeister:

Enclosed please find the analytical data for your project.

The following is a cross correlation of client and laboratory identifications for your convenience.

CLIENT ID	MATRIX	AMTEST ID	TEST
FL358-MW13-220628	Water	22-A011000	DEM
FL358-MW8-220628	Water	22-A011001	DEM
FL358-MW9-220628	Water	22-A011002	DEM
FL358-MW100-220628	Water	22-A011003	DEM

Your samples were received on Wednesday, June 29, 2022. At the time of receipt, the samples were logged in and properly maintained prior to the subsequent analysis.

The analytical procedures used at AmTest are well documented and are typically derived from the protocols of the EPA, USDA, FDA or the Army Corps of Engineers.

Following the analytical data you will find the Quality Control (QC) results.

Please note that the detection limits that are listed in the body of the report refer to the Practical Quantitation Limits (PQL's), as opposed to the Method Detection Limits (MDL's).

If you should have any questions pertaining to the data package, please feel free to contact me.

Sincerely,

  
Aaron W. Young  
Vice President

Project #: 105474-050  
SDG #: 2224770

BACT = Bacteriological  
CONV = Conventional

MET = Metals  
ORG = Organics

NUT=Nutrients  
DEM=Demand

MIN=Minerals

**Am Test Inc.**  
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Suite C  
Kirkland, WA 98034  
(425) 885-1664  
www.amtestlab.com



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## ANALYSIS REPORT

On-Site Environmental  
14648 NE 95th ST  
Redmond, WA 98052  
Attention: David Baumeister  
SDG Number: 2224770  
Project #: 105474-050  
All results reported on an as received basis.

Date Received: 06/29/22  
Date Reported: 7/ 8/22

---

**AMTEST Identification Number** 22-A011000  
**Client Identification** FL358-MW13-220628  
**Sampling Date** 06/28/22, 11:05

### Demand

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
BOD	< 2	mg/l		2	SM 5210B	JM	06/30/22

---

**AMTEST Identification Number** 22-A011001  
**Client Identification** FL358-MW8-220628  
**Sampling Date** 06/28/22, 12:35

### Demand

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
BOD	< 2	mg/l		2	SM 5210B	JM	06/30/22

On-Site Environmental  
Project Name:  
AmTest ID: 22-A011002

---

**AMTEST Identification Number**      22-A011002  
**Client Identification**                FL358-MW9-220628  
**Sampling Date**                         06/28/22, 14:35

**Demand**

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
BOD	5.4	mg/l	Q	2	SM 5210B	JM	06/30/22

---

**AMTEST Identification Number**      22-A011003  
**Client Identification**                FL358-MW100-220628  
**Sampling Date**                         06/28/22, 16:00

**Demand**

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
BOD	2.9	mg/l	Q	2	SM 5210B	JM	06/30/22

Q = Seed control did not meet the method specification of 2ppm.

  
Aaron W. Young  
Vice President

Am Test Inc.  
13600 NE 126th PL  
Suite C  
Kirkland, WA, 98034  
(425) 885-1664  
www.amtestlab.com



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**QC Summary for sample numbers: 22-A011000 to 22-A011003**

**DUPLICATES**

SAMPLE #	ANALYTE	UNITS	SAMPLE VALUE	DUP VALUE	RPD
22-A011017	BOD	mg/l	280	290	3.5

**BLANKS**

ANALYTE	UNITS	RESULT
BOD	mg/l	< 2



14648 NE 95th Street, Redmond, WA 98052 · (425) 883-3881

Laboratory: AmTest Laboratories

Attention: Aaron Young

13600 NE 126th PI Kirkland, WA 98034

Phone Number: (425) 885-1664

Turnaround Request

1 Day    2 Day    3 Day  
 Standard

Other: \_\_\_\_\_

Laboratory Reference #: 06-308

Project Manager: David Baumeister

email: [dbaumeister@onsite-env.com](mailto:dbaumeister@onsite-env.com)

Project Number: 105474-050

Project Name: \_\_\_\_\_

11000  
11001  
11002  
11003

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	# of Cont.	Requested Analyses
11000	FL358-MW13-220628	6/28/22	11:05	W	1	BOD 5 SM 5210B
11001	FL358-MW8-220628	6/28/22	12:35	W	1	BOD 5 SM 5210B
11002	FL358-MW9-220628	6/28/22	14:35	W	1	BOD 5 SM 5210B
11003	FL358-MW100-220628	6/28/22	16:00	W	1	BOD 5 SM 5210B

Relinquished by:	Company	Date	Time	Comments/Special Instructions
<i>Nicole Blum</i>	<i>OSE</i>	<i>6/29/22</i>	<i>13:50</i>	<b>EDDs</b>
Received by: <i>Kylin Gu</i>	<i>AMTSE</i>	<i>6/29/22</i>	<i>13:50</i>	
Relinquished by:				
Received by:				
Relinquished by:				
Received by:				

*6.60C*



3600 Fremont Ave. N.  
Seattle, WA 98103  
T: (206) 352-3790  
F: (206) 352-7178  
info@fremontanalytical.com

**OnSite Environmental Inc**  
David Baumeister  
14648 NE 95th Street  
Redmond, WA 98052

**RE: FL 358 Monitoring Wells**  
**Work Order Number: 2206475**

July 07, 2022

**Attention David Baumeister:**

Fremont Analytical, Inc. received 4 sample(s) on 6/29/2022 for the analyses presented in the following report.

***Ferrous Iron by SM3500-Fe B***

This report consists of the following:

- Case Narrative
- Analytical Results
- Applicable Quality Control Summary Reports
- Chain of Custody

All analyses were performed consistent with the Quality Assurance program of Fremont Analytical, Inc. Please contact the laboratory if you should have any questions about the results.

Thank you for using Fremont Analytical.

Sincerely,

Brianna Barnes  
Project Manager

*DoD-ELAP Accreditation #79636 by PJLA, ISO/IEC 17025:2017 and QSM 5.3 for Environmental Testing  
ORELAP Certification: WA 100009 (NELAP Recognized) for Environmental Testing  
Washington State Department of Ecology Accredited for Environmental Testing, Lab ID C910*

Original

[www.fremontanalytical.com](http://www.fremontanalytical.com)



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**CLIENT:** OnSite Environmental Inc  
**Project:** FL 358 Monitoring Wells  
**Work Order:** 2206475

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**Work Order Sample Summary**

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<b>Lab Sample ID</b>	<b>Client Sample ID</b>	<b>Date/Time Collected</b>	<b>Date/Time Received</b>
2206475-001	FL358-MW13-220628	06/28/2022 11:05 AM	06/29/2022 8:18 AM
2206475-002	FL358-MW8-220628	06/28/2022 12:35 PM	06/29/2022 8:18 AM
2206475-003	FL358-MW9-220628	06/28/2022 2:35 PM	06/29/2022 8:18 AM
2206475-004	FL358-MW100-220628	06/28/2022 4:00 PM	06/29/2022 8:18 AM

Note: If no "Time Collected" is supplied, a default of 12:00AM is assigned

**CLIENT:** OnSite Environmental Inc

**Project:** FL 358 Monitoring Wells

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**I. SAMPLE RECEIPT:**

Samples receipt information is recorded on the attached Sample Receipt Checklist.

**II. GENERAL REPORTING COMMENTS:**

Results are reported on a wet weight basis unless dry-weight correction is denoted in the units field on the analytical report ("mg/kg-dry" or "ug/kg-dry").

Matrix Spike (MS) and MS Duplicate (MSD) samples are tested from an analytical batch of "like" matrix to check for possible matrix effect. The MS and MSD will provide site specific matrix data only for those samples which are spiked by the laboratory. The sample chosen for spike purposes may or may not have been a sample submitted in this sample delivery group. The validity of the analytical procedures for which data is reported in this analytical report is determined by the Laboratory Control Sample (LCS) and the Method Blank (MB). The LCS and the MB are processed with the samples and the MS/MSD to ensure method criteria are achieved throughout the entire analytical process.

**III. ANALYSES AND EXCEPTIONS:**

Exceptions associated with this report will be footnoted in the analytical results page(s) or the quality control summary page(s) and/or noted below.

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Qualifiers:

- \* - Flagged value is not within established control limits
- B - Analyte detected in the associated Method Blank
- D - Dilution was required
- E - Value above quantitation range
- H - Holding times for preparation or analysis exceeded
- I - Analyte with an internal standard that does not meet established acceptance criteria
- J - Analyte detected below Reporting Limit
- N - Tentatively Identified Compound (TIC)
- Q - Analyte with an initial or continuing calibration that does not meet established acceptance criteria
- S - Spike recovery outside accepted recovery limits
- ND - Not detected at the Reporting Limit
- R - High relative percent difference observed

Acronyms:

- %Rec - Percent Recovery
- CCB - Continued Calibration Blank
- CCV - Continued Calibration Verification
- DF - Dilution Factor
- DUP - Sample Duplicate
- HEM - Hexane Extractable Material
- ICV - Initial Calibration Verification
- LCS/LCSD - Laboratory Control Sample / Laboratory Control Sample Duplicate
- MCL - Maximum Contaminant Level
- MB or MBLANK - Method Blank
- MDL - Method Detection Limit
- MS/MSD - Matrix Spike / Matrix Spike Duplicate
- PDS - Post Digestion Spike
- Ref Val - Reference Value
- REP - Sample Replicate
- RL - Reporting Limit
- RPD - Relative Percent Difference
- SD - Serial Dilution
- SGT - Silica Gel Treatment
- SPK - Spike
- Surr - Surrogate



**CLIENT:** OnSite Environmental Inc  
**Project:** FL 358 Monitoring Wells

**Lab ID:** 2206475-001 **Collection Date:** 6/28/2022 11:05:00 AM  
**Client Sample ID:** FL358-MW13-220628 **Matrix:** Water

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<b><u>Ferrous Iron by SM3500-Fe B</u></b> Batch ID: R76628 Analyst: ALT						
Ferrous Iron	0.985	0.100		mg/L	1	6/29/2022 10:25:00 AM

**Lab ID:** 2206475-002 **Collection Date:** 6/28/2022 12:35:00 PM  
**Client Sample ID:** FL358-MW8-220628 **Matrix:** Water

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<b><u>Ferrous Iron by SM3500-Fe B</u></b> Batch ID: R76628 Analyst: ALT						
Ferrous Iron	0.457	0.100		mg/L	1	6/29/2022 10:25:00 AM

**Lab ID:** 2206475-003 **Collection Date:** 6/28/2022 2:35:00 PM  
**Client Sample ID:** FL358-MW9-220628 **Matrix:** Water

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<b><u>Ferrous Iron by SM3500-Fe B</u></b> Batch ID: R76628 Analyst: ALT						
Ferrous Iron	64.9	12.5	D	mg/L	125	6/29/2022 10:25:00 AM

**Lab ID:** 2206475-004 **Collection Date:** 6/28/2022 4:00:00 PM  
**Client Sample ID:** FL358-MW100-220628 **Matrix:** Water

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<b><u>Ferrous Iron by SM3500-Fe B</u></b> Batch ID: R76628 Analyst: ALT						
Ferrous Iron	69.8	12.5	D	mg/L	125	6/29/2022 10:25:00 AM

**Work Order:** 2206475  
**CLIENT:** OnSite Environmental Inc  
**Project:** FL 358 Monitoring Wells

**QC SUMMARY REPORT**  
**Ferrous Iron by SM3500-Fe B**

Sample ID: <b>MB-R76628</b>	SampType: <b>MBLK</b>	Units: <b>mg/L</b>	Prep Date: <b>6/29/2022</b>	RunNo: <b>76628</b>							
Client ID: <b>MBLKW</b>	Batch ID: <b>R76628</b>		Analysis Date: <b>6/29/2022</b>	SeqNo: <b>1572491</b>							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Ferrous Iron ND 0.100

Sample ID: <b>LCS-R76628</b>	SampType: <b>LCS</b>	Units: <b>mg/L</b>	Prep Date: <b>6/29/2022</b>	RunNo: <b>76628</b>							
Client ID: <b>LCSW</b>	Batch ID: <b>R76628</b>		Analysis Date: <b>6/29/2022</b>	SeqNo: <b>1572492</b>							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Ferrous Iron 0.349 0.100 0.4000 0 87.2 85 115

Sample ID: <b>2206475-004ADUP</b>	SampType: <b>DUP</b>	Units: <b>mg/L</b>	Prep Date: <b>6/29/2022</b>	RunNo: <b>76628</b>							
Client ID: <b>FL358-MW100-220628</b>	Batch ID: <b>R76628</b>		Analysis Date: <b>6/29/2022</b>	SeqNo: <b>1572498</b>							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Ferrous Iron 74.7 12.5 69.83 6.80 20 D

Sample ID: <b>2206475-004AMS</b>	SampType: <b>MS</b>	Units: <b>mg/L</b>	Prep Date: <b>6/29/2022</b>	RunNo: <b>76628</b>							
Client ID: <b>FL358-MW100-220628</b>	Batch ID: <b>R76628</b>		Analysis Date: <b>6/29/2022</b>	SeqNo: <b>1572499</b>							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Ferrous Iron 124 12.5 50.00 69.83 108 70 130 D

Sample ID: <b>2206475-004AMSD</b>	SampType: <b>MSD</b>	Units: <b>mg/L</b>	Prep Date: <b>6/29/2022</b>	RunNo: <b>76628</b>							
Client ID: <b>FL358-MW100-220628</b>	Batch ID: <b>R76628</b>		Analysis Date: <b>6/29/2022</b>	SeqNo: <b>1572500</b>							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Ferrous Iron 125 12.5 50.00 69.83 110 70 130 123.9 0.659 30 D

Client Name: ONSITE

Work Order Number: 2206475

Logged by: Elisabeth Samoray

Date Received: 6/29/2022 8:18:00 AM

### **Chain of Custody**

1. Is Chain of Custody complete? Yes  No  Not Present
2. How was the sample delivered? Courier

### **Log In**

3. Coolers are present? Yes  No  NA
4. Shipping container/cooler in good condition? Yes  No
5. Custody Seals present on shipping container/cooler?  
(Refer to comments for Custody Seals not intact) Yes  No  Not Present
6. Was an attempt made to cool the samples? Yes  No  NA
7. Were all items received at a temperature of >2°C to 6°C \* Yes  No  NA
8. Sample(s) in proper container(s)? Yes  No
9. Sufficient sample volume for indicated test(s)? Yes  No
10. Are samples properly preserved? Yes  No
11. Was preservative added to bottles? Yes  No  NA
12. Is there headspace in the VOA vials? Yes  No  NA
13. Did all samples containers arrive in good condition(unbroken)? Yes  No
14. Does paperwork match bottle labels? Yes  No
15. Are matrices correctly identified on Chain of Custody? Yes  No
16. Is it clear what analyses were requested? Yes  No
17. Were all holding times able to be met? Yes  No

### **Special Handling (if applicable)**

18. Was client notified of all discrepancies with this order? Yes  No  NA

Person Notified:	<input type="text"/>	Date:	<input type="text"/>
By Whom:	<input type="text"/>	Via:	<input type="checkbox"/> eMail <input type="checkbox"/> Phone <input type="checkbox"/> Fax <input type="checkbox"/> In Person
Regarding:	<input type="text"/>		
Client Instructions:	<input type="text"/>		

19. Additional remarks:

### **Item Information**

Item #	Temp °C
Sample 1	3.3

\* Note: DoD/ELAP and TNI require items to be received at 4°C +/- 2°C

# Chain of Custody

 Company: Shannon & Wilson  
 Project Number: 105474-050  
 Project Name: FL 358 Monitoring Wells  
 Project Manager: David Baumeister  
 Sampled by: MPH & JXS
**Turnaround Request (in working days)**  
 (Check One)  
 Same Day     1 Day  
 2 Days     3 Days  
 Standard (7 Days)  
 24 hr hold time  
 (other)

**Laboratory Number:**

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers
	FL358-MW13-220628	6/29/22	1105	Water	1
	FL358-MW8-220628	↓	1235	↓	1
	FL358-MW9-220628	↓	1435	↓	1
	FL358-MW100-220628	↓	1600	↓	1

NWTPH-HCID	NWTPH-Gx/BTEX (8021) 8260	NWTPH-Gx	NWTPH-Dx (Acid / SG Clean-up)	Volatiles 8260	Halogenated Volatiles 8260	EDB EPA 8011 (Waters Only)	Semivolatiles 8270/SIM (with low-level PAHs)	PAHs 8270/SIM (low-level)	PCBs 8082	Organochlorine Pesticides 8081	Organophosphorus Pesticides 8270/SIM	Chlorinated Acid Herbicides 8151	Total RCRA Metals	Total MTCA Metals	TCLP Metals	HEM (oil and grease) 1664	Ferrous Iron by SK350	% Moisture
																	X	
																	X	
																	X	
																	X	

Signature	Company	Date	Time	Comments/Special Instructions
<u>[Signature]</u>	<u>SWI</u>	<u>6/29</u>	<u>0800</u>	<u>24-hr hold time</u>
<u>[Signature]</u>	<u>ALPHA</u>	<u>6/29/22</u>	<u>0805</u>	
<u>[Signature]</u>	<u>ALPHA</u>	<u>6/29/22</u>	<u>0810</u>	
<u>[Signature]</u>	<u>FAI</u>	<u>6/29</u>	<u>0818</u>	Data Package: Standard <input type="checkbox"/> Level III <input type="checkbox"/> Level IV <input type="checkbox"/>
Reviewed/Date	Reviewed/Date	Chromatograms with final report <input type="checkbox"/> Electronic Data Deliverables (EDDs) <input type="checkbox"/>		

# Chain of Custody

Company: Shannon & Wilson

Project Number: 105474-050

Project Name: FL 358 Monitoring Wells

Project Manager: Joseph Sandey

Sampled by: MRH / JXS

**Turnaround Request (in working days)**

(Check One)

Same Day     1 Day

2 Days     3 Days

Standard (7 Days)

\_\_\_\_\_ (other)

Laboratory Number: **06-308**

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers
1	TB-220628	6/29/22	0800	Water	1
2	FL358-MW13-220628	↓	1105	↓	9
3	FL358-MW8-220628		1235		12
4	FL358-MW9-220628		1435		9
5	FL358-MW100-220628		1600		9
6	Rinsate-220628		1530		3

NWTPH-HCID	NWTPH-Gx/BTEX (802) <input type="checkbox"/> 8260 <input type="checkbox"/>	NWTPH-Gx	NWTPH-Dx (Acid / SG Clean-up) <input type="checkbox"/>	Volatiles 8260	Halogenated Volatiles 8260	EDB EPA 8011 (Waters Only)	Semivolatiles 8270/SIM (with low-level PAHs)	PAHs 8270/SIM (low-level)	PCBs 8082	Organochlorine Pesticides 8081	Organophosphorus Pesticides 8270/SIM	Chlorinated Acid Herbicides 8151	Total FCRA Metals	Total MTCA Metals	Trace Metals	HEM (oil and grease) 1664	Ammia, Nitrite, Nitrate	Toc by SM 5310B	BOD by SM 5210B	Total iron by EPA 6010	Dissolved gases by BSL 175
					X																
					X										X		X	X	X	X	X
					X										X		X	X	X	X	X
					X										X		X	X	X	X	X
					X										X		X	X	X	X	X

Signature	Company	Date	Time	Comments/Special Instructions
	SwI	6/29	0800	MS/MSD on FL358-MW8-220628 (3 extra VOA's)
	ALPHA	6/29/22	0805	HVOCs = PCE, TCE, cis- and trans-1,2-DCP, 1,1-DEE, and VC. Reporting limit < 0.2ug/L.
	ALPHA	6/29/22	1230	
	OYE	6/29/22	1230	Dissolved Gases = Methane, Ethane, Ethene, Acetylene <b>X</b> Send directly to Fremont Analytical
				Data Package: Standard <input type="checkbox"/> Level III <input type="checkbox"/> Level IV <input type="checkbox"/>
Reviewed/Date	Reviewed/Date			Chromatograms with final report <input type="checkbox"/> Electronic Data Deliverables (EDDs) <input type="checkbox"/>



14648 NE 95<sup>th</sup> Street, Redmond, WA 98052 • (425) 883-3881

July 14, 2022

Joseph Sawdey  
Shannon & Wilson, Inc.  
400 N 34th Street, Suite 100  
Seattle, WA 98103

Re: Analytical Data for Project 105474-050  
Laboratory Reference No. 2206-332

Dear Joseph:

Enclosed are the analytical results and associated quality control data for samples submitted on June 30, 2022.

The standard policy of OnSite Environmental, Inc. is to store your samples for 30 days from the date of receipt. If you require longer storage, please contact the laboratory.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning the data, or need additional information, please feel free to call me.

Sincerely,

A handwritten signature in black ink, appearing to read "DB", with a long horizontal flourish extending to the right.

David Baumeister  
Project Manager

Enclosures



---

OnSite Environmental, Inc. 14648 NE 95<sup>th</sup> Street, Redmond, WA 98052 (425) 883-3881

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: July 14, 2022  
Samples Submitted: June 30, 2022  
Laboratory Reference: 2206-332  
Project: 105474-050

### Case Narrative

Samples were collected on June 29, 2022 and received by the laboratory on June 30, 2022. They were maintained at the laboratory at a temperature of 2°C to 6°C.

Please note that any and all soil sample results are reported on a dry-weight basis, unless otherwise noted below.

General QA/QC issues associated with the analytical data enclosed in this laboratory report will be indicated with a reference to a comment or explanation on the Data Qualifier page. More complex and involved QA/QC issues will be discussed in detail below.

#### Dissolved Gases by RSK-175 Analysis

Sample FL358-MW7-220629 had a surrogate recovery outside of laboratory control limits. The sample was re-run with similar results, indicating probable matrix interference.

Due to the high concentration of Methane in the native sample used for the MS/MSD, meaningful recovery data for this compound could not be obtained. In the MS sample, Acetylene was recovered below laboratory control limits. Please note that proper statistical control limits for this compound are still being developed, therefore this should not be considered a true quality control failure. A SB/SBD analyzed with this set had all parameters fall within control limits.

Any other QA/QC issues associated with this extraction and analysis will be indicated with a footnote reference and discussed in detail on the Data Qualifier page.



Date of Report: July 14, 2022  
 Samples Submitted: June 30, 2022  
 Laboratory Reference: 2206-332  
 Project: 105474-050

**VOLATILE ORGANICS EPA 8260D**  
 page 1 of 2

Matrix: Water  
 Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>TB-220629</b>					
Laboratory ID:	06-332-01					
Vinyl Chloride	ND	0.20	EPA 8260D	7-6-22	7-6-22	
1,1-Dichloroethene	ND	0.20	EPA 8260D	7-6-22	7-6-22	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260D	7-6-22	7-6-22	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260D	7-6-22	7-6-22	
Trichloroethene	ND	0.20	EPA 8260D	7-6-22	7-6-22	
Tetrachloroethene	ND	0.20	EPA 8260D	7-6-22	7-6-22	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>101</i>	<i>75-127</i>				
<i>Toluene-d8</i>	<i>98</i>	<i>80-127</i>				
<i>4-Bromofluorobenzene</i>	<i>102</i>	<i>78-125</i>				
<b>Client ID:</b>	<b>FL358-MW7-220629</b>					
Laboratory ID:	06-332-02					
Vinyl Chloride	3.7	0.20	EPA 8260D	7-6-22	7-6-22	
1,1-Dichloroethene	ND	0.20	EPA 8260D	7-6-22	7-6-22	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260D	7-6-22	7-6-22	
(cis) 1,2-Dichloroethene	6.0	0.20	EPA 8260D	7-6-22	7-6-22	
Trichloroethene	ND	0.20	EPA 8260D	7-6-22	7-6-22	
Tetrachloroethene	0.33	0.20	EPA 8260D	7-6-22	7-6-22	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>99</i>	<i>75-127</i>				
<i>Toluene-d8</i>	<i>99</i>	<i>80-127</i>				
<i>4-Bromofluorobenzene</i>	<i>101</i>	<i>78-125</i>				
<b>Client ID:</b>	<b>Rinsate-220629</b>					
Laboratory ID:	06-332-03					
Vinyl Chloride	ND	0.20	EPA 8260D	7-6-22	7-6-22	
1,1-Dichloroethene	ND	0.20	EPA 8260D	7-6-22	7-6-22	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260D	7-6-22	7-6-22	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260D	7-6-22	7-6-22	
Trichloroethene	ND	0.20	EPA 8260D	7-6-22	7-6-22	
Tetrachloroethene	0.20	0.20	EPA 8260D	7-6-22	7-6-22	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>99</i>	<i>75-127</i>				
<i>Toluene-d8</i>	<i>101</i>	<i>80-127</i>				
<i>4-Bromofluorobenzene</i>	<i>103</i>	<i>78-125</i>				



Date of Report: July 14, 2022  
 Samples Submitted: June 30, 2022  
 Laboratory Reference: 2206-332  
 Project: 105474-050

**VOLATILE ORGANICS EPA 8260D**  
 page 2 of 2

Matrix: Water  
 Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>FL358-MW14-220629</b>					
Laboratory ID:	06-332-04					
Vinyl Chloride	2.5	0.20	EPA 8260D	7-6-22	7-6-22	
1,1-Dichloroethene	ND	0.20	EPA 8260D	7-6-22	7-6-22	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260D	7-6-22	7-6-22	
(cis) 1,2-Dichloroethene	16	0.20	EPA 8260D	7-6-22	7-6-22	
Trichloroethene	0.35	0.20	EPA 8260D	7-6-22	7-6-22	
Tetrachloroethene	ND	0.20	EPA 8260D	7-6-22	7-6-22	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>97</i>	<i>75-127</i>				
<i>Toluene-d8</i>	<i>98</i>	<i>80-127</i>				
<i>4-Bromofluorobenzene</i>	<i>101</i>	<i>78-125</i>				

<b>Client ID:</b>	<b>FL358-MW12-220629</b>					
Laboratory ID:	06-332-05					
Vinyl Chloride	ND	0.20	EPA 8260D	7-6-22	7-6-22	
1,1-Dichloroethene	ND	0.20	EPA 8260D	7-6-22	7-6-22	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260D	7-6-22	7-6-22	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260D	7-6-22	7-6-22	
Trichloroethene	ND	0.20	EPA 8260D	7-6-22	7-6-22	
Tetrachloroethene	ND	0.20	EPA 8260D	7-6-22	7-6-22	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>95</i>	<i>75-127</i>				
<i>Toluene-d8</i>	<i>95</i>	<i>80-127</i>				
<i>4-Bromofluorobenzene</i>	<i>98</i>	<i>78-125</i>				



Date of Report: July 14, 2022  
 Samples Submitted: June 30, 2022  
 Laboratory Reference: 2206-332  
 Project: 105474-050

**VOLATILE ORGANICS EPA 8260D  
 QUALITY CONTROL**

Matrix: Water  
 Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>METHOD BLANK</b>						
Laboratory ID:	MB0706W1					
Vinyl Chloride	ND	0.20	EPA 8260D	7-6-22	7-6-22	
1,1-Dichloroethene	ND	0.20	EPA 8260D	7-6-22	7-6-22	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260D	7-6-22	7-6-22	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260D	7-6-22	7-6-22	
Trichloroethene	ND	0.20	EPA 8260D	7-6-22	7-6-22	
Tetrachloroethene	ND	0.20	EPA 8260D	7-6-22	7-6-22	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	99	75-127				
<i>Toluene-d8</i>	99	80-127				
<i>4-Bromofluorobenzene</i>	99	78-125				

Analyte	Result		Spike Level		Source Result	Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
<b>MATRIX SPIKES</b>											
Laboratory ID:	06-332-02										
	MS	MSD	MS	MSD		MS	MSD				
1,1-Dichloroethene	<b>9.96</b>	<b>9.38</b>	10.0	10.0	ND	100	94	76-124	6	15	
Benzene	<b>10.5</b>	<b>9.87</b>	10.0	10.0	ND	105	99	74-122	6	16	
Trichloroethene	<b>11.3</b>	<b>10.8</b>	10.0	10.0	ND	113	108	79-129	5	17	
Toluene	<b>10.9</b>	<b>10.5</b>	10.0	10.0	ND	109	105	80-120	4	19	
Chlorobenzene	<b>11.3</b>	<b>10.8</b>	10.0	10.0	ND	113	108	78-120	5	16	
<i>Surrogate:</i>											
<i>Dibromofluoromethane</i>						101	98	75-127			
<i>Toluene-d8</i>						102	102	80-127			
<i>4-Bromofluorobenzene</i>						102	104	78-125			



Date of Report: July 14, 2022  
 Samples Submitted: June 30, 2022  
 Laboratory Reference: 2206-332  
 Project: 105474-050

**AMMONIA (as Nitrogen)**  
**SM 4500-NH<sub>3</sub> D**

Matrix: Water  
 Units: mg/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>FL358-MW7-220629</b>					
Laboratory ID:	06-332-02					
Ammonia	<b>2.9</b>	0.050	SM 4500-NH3 D	7-14-22	7-14-22	

<b>Client ID:</b>	<b>FL358-MW14-220629</b>					
Laboratory ID:	06-332-04					
Ammonia	<b>0.060</b>	0.050	SM 4500-NH3 D	7-14-22	7-14-22	

<b>Client ID:</b>	<b>FL358-MW12-220629</b>					
Laboratory ID:	06-332-05					
Ammonia	<b>4.5</b>	0.050	SM 4500-NH3 D	7-14-22	7-14-22	



Date of Report: July 14, 2022  
 Samples Submitted: June 30, 2022  
 Laboratory Reference: 2206-332  
 Project: 105474-050

**AMMONIA (as Nitrogen)**  
**SM 4500-NH<sub>3</sub> D**  
**QUALITY CONTROL**

Matrix: Water  
 Units: mg/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>METHOD BLANK</b>						
Laboratory ID:	MB0714W1					
Ammonia	<b>ND</b>	0.050	SM 4500-NH3 D	7-14-22	7-14-22	

Analyte	Result	Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
<b>DUPLICATE</b>								
Laboratory ID:	07-005-03							
	ORIG	DUP						
Ammonia	<b>0.102</b>	<b>0.0901</b>	NA	NA	NA	12	15	

<b>MATRIX SPIKE</b>								
Laboratory ID:	07-005-03							
	MS	MS		MS				
Ammonia	<b>4.84</b>	5.00	0.102	95	87-110	NA	NA	

<b>SPIKE BLANK</b>								
Laboratory ID:	SB0714W1							
	SB	SB		SB				
Ammonia	<b>4.78</b>	5.00	NA	96	88-110	NA	NA	



Date of Report: July 14, 2022  
 Samples Submitted: June 30, 2022  
 Laboratory Reference: 2206-332  
 Project: 105474-050

**NITRATE (as Nitrogen)**  
**EPA 353.2**

Matrix: Water  
 Units: mg/L-N

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>FL358-MW7-220629</b>					
Laboratory ID:	06-332-02					
Nitrate	<b>0.064</b>	0.050	EPA 353.2	6-30-22	6-30-22	

<b>Client ID:</b>	<b>FL358-MW14-220629</b>					
Laboratory ID:	06-332-04					
Nitrate	<b>ND</b>	0.050	EPA 353.2	6-30-22	6-30-22	

<b>Client ID:</b>	<b>FL358-MW12-220629</b>					
Laboratory ID:	06-332-05					
Nitrate	<b>0.082</b>	0.050	EPA 353.2	6-30-22	6-30-22	



Date of Report: July 14, 2022  
 Samples Submitted: June 30, 2022  
 Laboratory Reference: 2206-332  
 Project: 105474-050

**NITRATE (as Nitrogen)**  
**EPA 353.2**  
**QUALITY CONTROL**

Matrix: Water  
 Units: mg/L-N

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>METHOD BLANK</b>						
Laboratory ID:	MB0630W1					
Nitrate	<b>ND</b>	0.050	EPA 353.2	6-30-22	6-30-22	

Analyte	Result	Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
<b>DUPLICATE</b>								
Laboratory ID:	06-332-02							
	ORIG	DUP						
Nitrate	<b>0.0644</b>	<b>ND</b>	NA	NA	NA	NA	10	

<b>MATRIX SPIKE</b>								
Laboratory ID:	06-332-02							
	MS	MS		MS				
Nitrate	<b>2.21</b>	2.00	0.0644	107	88-125	NA	NA	

<b>SPIKE BLANK</b>								
Laboratory ID:	SB0630W1							
	SB	SB		SB				
Nitrate	<b>2.21</b>	2.00	NA	111	90-120	NA	NA	



Date of Report: July 14, 2022  
 Samples Submitted: June 30, 2022  
 Laboratory Reference: 2206-332  
 Project: 105474-050

**NITRITE (as Nitrogen)**  
**EPA 353.2**

Matrix: Water  
 Units: mg/L-N

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>FL358-MW7-220629</b>					
Laboratory ID:	06-332-02					
Nitrite	<b>ND</b>	0.020	EPA 353.2	6-30-22	6-30-22	

<b>Client ID:</b>	<b>FL358-MW14-220629</b>					
Laboratory ID:	06-332-04					
Nitrite	<b>ND</b>	0.020	EPA 353.2	6-30-22	6-30-22	

<b>Client ID:</b>	<b>FL358-MW12-220629</b>					
Laboratory ID:	06-332-05					
Nitrite	<b>ND</b>	0.020	EPA 353.2	6-30-22	6-30-22	



Date of Report: July 14, 2022  
 Samples Submitted: June 30, 2022  
 Laboratory Reference: 2206-332  
 Project: 105474-050

**NITRITE (as Nitrogen)**  
**EPA 353.2**  
**QUALITY CONTROL**

Matrix: Water  
 Units: mg/L-N

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>METHOD BLANK</b>						
Laboratory ID:	MB0730W1					
Nitrite	<b>ND</b>	0.020	EPA 353.2	6-30-22	6-30-22	

Analyte	Result	Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
<b>DUPLICATE</b>								
Laboratory ID:	06-332-02							
	ORIG	DUP						
Nitrite	<b>ND</b>	<b>ND</b>	NA	NA	NA	NA	11	

<b>MATRIX SPIKE</b>								
Laboratory ID:	06-332-02							
	MS	MS		MS				
Nitrite	<b>0.258</b>	0.250	ND	103	83-117	NA	NA	

<b>SPIKE BLANK</b>								
Laboratory ID:	SB0630W1							
	SB	SB		SB				
Nitrite	<b>0.251</b>	0.250	NA	100	91-112	NA	NA	



Date of Report: July 14, 2022  
 Samples Submitted: June 30, 2022  
 Laboratory Reference: 2206-332  
 Project: 105474-050

**TOTAL ORGANIC CARBON  
 SM 5310B**

Matrix: Water  
 Units: mg/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>FL358-MW7-220629</b>					
Laboratory ID:	06-332-02					
Total Organic Carbon	<b>20</b>	1.0	SM 5310B	7-12-22	7-12-22	

<b>Client ID:</b>	<b>FL358-MW14-220629</b>					
Laboratory ID:	06-332-04					
Total Organic Carbon	<b>10</b>	1.0	SM 5310B	7-12-22	7-12-22	

<b>Client ID:</b>	<b>FL358-MW12-220629</b>					
Laboratory ID:	06-332-05					
Total Organic Carbon	<b>28</b>	1.0	SM 5310B	7-12-22	7-12-22	



Date of Report: July 14, 2022  
 Samples Submitted: June 30, 2022  
 Laboratory Reference: 2206-332  
 Project: 105474-050

**TOTAL ORGANIC CARBON  
 SM 5310B  
 QUALITY CONTROL**

Matrix: Water  
 Units: mg/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>METHOD BLANK</b>						
Laboratory ID:	MB0712W2					
Total Organic Carbon	<b>ND</b>	1.0	SM 5310B	7-12-22	7-12-22	

Analyte	Result	Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
<b>DUPLICATE</b>								
Laboratory ID:	06-308-03							
	ORIG	DUP						
Total Organic Carbon	<b>4.40</b>	<b>4.45</b>	NA	NA	NA	1	12	

**MATRIX SPIKE**

Laboratory ID:	06-308-03							
	MS	MS		MS				
Total Organic Carbon	<b>13.9</b>		10.0	4.40	95	80-120	NA	NA

**SPIKE BLANK**

Laboratory ID:	SB0712W2							
	SB	SB		SB				
Total Organic Carbon	<b>9.82</b>		10.0	NA	98	80-118	NA	NA



Date of Report: July 14, 2022  
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 Project: 105474-050

**TOTAL IRON  
 EPA 6010D**

Matrix: Water  
 Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>FL358-MW7-220629</b>					
Laboratory ID:	06-332-02					
Iron	<b>36000</b>	500	EPA 6010D	7-5-22	7-5-22	

<b>Client ID:</b>	<b>FL358-MW14-220629</b>					
Laboratory ID:	06-332-04					
Iron	<b>7800</b>	50	EPA 6010D	7-5-22	7-5-22	

<b>Client ID:</b>	<b>FL358-MW12-220629</b>					
Laboratory ID:	06-332-05					
Iron	<b>70000</b>	500	EPA 6010D	7-5-22	7-5-22	



Date of Report: July 14, 2022  
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**TOTAL IRON  
 EPA 6010D  
 QUALITY CONTROL**

Matrix: Water  
 Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>METHOD BLANK</b>						
Laboratory ID:	MB0705WH1					
Iron	<b>ND</b>	50	EPA 6010D	7-5-22	7-5-22	

Analyte	Result	Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
<b>DUPLICATE</b>								
Laboratory ID:	06-292-03							
	ORIG	DUP						
Iron	<b>46000</b>	<b>44500</b>	NA	NA	NA	3	20	

**MATRIX SPIKES**

Laboratory ID:	MS	MSD	MS	MSD	MS	MSD	RPD	RPD Limit	Flags
Laboratory ID:	06-292-03								
MS	MSD	MS	MSD	MS	MSD				
Iron	<b>65700</b>	<b>66800</b>	20000	20000	46000	<b>99</b>	<b>104</b>	75-125	2 20



Date of Report: July 14, 2022  
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 Laboratory Reference: 2206-332  
 Project: 105474-050

**DISSOLVED GASES  
RSK 175**

Matrix: Water  
 Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>FL358-MW7-220629</b>					
Laboratory ID:	06-332-02					
Methane	<b>4100</b>	55	RSK 175	7-1-22	7-1-22	
Ethane	<b>ND</b>	0.22	RSK 175	7-1-22	7-1-22	
Ethene	<b>ND</b>	0.29	RSK 175	7-1-22	7-1-22	
Acetylene	<b>ND</b>	1.2	RSK 175	7-1-22	7-1-22	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
1-Butene	66	70-130				Q

<b>Client ID:</b>	<b>FL358-MW14-220629</b>					
Laboratory ID:	06-332-04					
Methane	<b>510</b>	5.5	RSK 175	7-1-22	7-1-22	
Ethane	<b>ND</b>	0.22	RSK 175	7-1-22	7-1-22	
Ethene	<b>ND</b>	0.29	RSK 175	7-1-22	7-1-22	
Acetylene	<b>ND</b>	1.2	RSK 175	7-1-22	7-1-22	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
1-Butene	86	70-130				

<b>Client ID:</b>	<b>FL358-MW12-220629</b>					
Laboratory ID:	06-332-05					
Methane	<b>3100</b>	28	RSK 175	7-1-22	7-1-22	
Ethane	<b>ND</b>	0.22	RSK 175	7-1-22	7-1-22	
Ethene	<b>ND</b>	0.29	RSK 175	7-1-22	7-1-22	
Acetylene	<b>ND</b>	1.2	RSK 175	7-1-22	7-1-22	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
1-Butene	84	70-130				



Date of Report: July 14, 2022  
 Samples Submitted: June 30, 2022  
 Laboratory Reference: 2206-332  
 Project: 105474-050

**DISSOLVED GASES  
 RSK 175  
 QUALITY CONTROL**

Matrix: Water  
 Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>METHOD BLANK</b>						
Laboratory ID:	MB0701W1					
Methane	ND	0.55	RSK 175	7-1-22	7-1-22	
Ethane	ND	0.22	RSK 175	7-1-22	7-1-22	
Ethene	ND	0.29	RSK 175	7-1-22	7-1-22	
Acetylene	ND	1.2	RSK 175	7-1-22	7-1-22	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
1-Butene	91	70-130				

Analyte	Result		Spike Level		Source Result	Percent Recovery		Recovery Limits		RPD	RPD Limit	Flags
<b>MATRIX SPIKES</b>												
Laboratory ID:	06-308-03											
	MS	MSD	MS	MSD		MS	MSD					
Methane	111	111	44.2	44.2	169	NA	NA	75-125	0	25		A,A
Ethane	80.2	80.8	83.2	83.2	ND	96	97	75-125	1	25		
Ethene	73.4	74.5	77.7	77.7	ND	95	96	75-125	1	25		
Acetylene	52.7	54.2	72.0	72.0	ND	73	75	75-125	3	25		V
<i>Surrogate:</i>												
1-Butene						84	86	70-130				





### Data Qualifiers and Abbreviations

- A - Due to a high sample concentration, the amount spiked is insufficient for meaningful MS/MSD recovery data.
  - B - The analyte indicated was also found in the blank sample.
  - C - The duplicate RPD is outside control limits due to high result variability when analyte concentrations are within five times the quantitation limit.
  - E - The value reported exceeds the quantitation range and is an estimate.
  - F - Surrogate recovery data is not available due to the high concentration of coeluting target compounds.
  - H - The analyte indicated is a common laboratory solvent and may have been introduced during sample preparation, and be impacting the sample result.
  - I - Compound recovery is outside of the control limits.
  - J - The value reported was below the practical quantitation limit. The value is an estimate.
  - K - Sample duplicate RPD is outside control limits due to sample inhomogeneity. The sample was re-extracted and re-analyzed with similar results.
  - L - The RPD is outside of the control limits.
  - M - Hydrocarbons in the gasoline range are impacting the diesel range result.
  - M1 - Hydrocarbons in the gasoline range (toluene-naphthalene) are present in the sample.
  - N - Hydrocarbons in the lube oil range are impacting the diesel range result.
  - N1 - Hydrocarbons in diesel range are impacting lube oil range results.
  - O - Hydrocarbons indicative of heavier fuels are present in the sample and are impacting the gasoline result.
  - P - The RPD of the detected concentrations between the two columns is greater than 40.
  - Q - Surrogate recovery is outside of the control limits.
  - S - Surrogate recovery data is not available due to the necessary dilution of the sample.
  - T - The sample chromatogram is not similar to a typical \_\_\_\_\_.
  - U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.
  - U1 - The practical quantitation limit is elevated due to interferences present in the sample.
  - V - Matrix Spike/Matrix Spike Duplicate recoveries are outside control limits due to matrix effects.
  - W - Matrix Spike/Matrix Spike Duplicate RPD are outside control limits due to matrix effects.
  - X - Sample extract treated with a mercury cleanup procedure.
  - X1 - Sample extract treated with a sulfuric acid/silica gel cleanup procedure.
  - X2 - Sample extract treated with a silica gel cleanup procedure.
  - Y - The calibration verification for this analyte exceeded the 20% drift specified in methods 8260 & 8270, and therefore the reported result should be considered an estimate. The overall performance of the calibration verification standard met the acceptance criteria of the method.
  - Y1 - Negative effects of the matrix from this sample on the instrument caused values for this analyte in the bracketing continuing calibration verification standard (CCVs) to be outside of 20% acceptance criteria. Because of this, quantitation limits and sample concentrations should be considered estimates.
  - Z -
- ND - Not Detected at PQL  
 PQL - Practical Quantitation Limit  
 RPD - Relative Percent Difference





Am Test Inc.  
13600 NE 126TH PL  
Suite C  
Kirkland, WA 98034  
(425) 885-1664

Professional  
Analytical  
Services

Jul 8 2022  
On-Site Environmental  
14648 NE 95th ST  
Redmond, WA 98052  
Attention: David Baumeister

Dear David Baumeister:

Enclosed please find the analytical data for your project.

The following is a cross correlation of client and laboratory identifications for your convenience.

CLIENT ID	MATRIX	AMTEST ID	TEST
FL358-MW7-220629	Water	22-A011068	DEM
FL358-MW14-220629	Water	22-A011069	DEM
FL358-MW12-220629	Water	22-A011070	DEM

Your samples were received on Thursday, June 30, 2022. At the time of receipt, the samples were logged in and properly maintained prior to the subsequent analysis.

The analytical procedures used at AmTest are well documented and are typically derived from the protocols of the EPA, USDA, FDA or the Army Corps of Engineers.

Following the analytical data you will find the Quality Control (QC) results.

Please note that the detection limits that are listed in the body of the report refer to the Practical Quantitation Limits (PQL's), as opposed to the Method Detection Limits (MDL's).

If you should have any questions pertaining to the data package, please feel free to contact me.

Sincerely,

  
Aaron W. Young  
Vice President

Project #: 105474-050  
SDG #: 2224790

BACT = Bacteriological  
CONV = Conventional

MET = Metals  
ORG = Organics

NUT=Nutrients  
DEM=Demand

MIN=Minerals

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www.amtestlab.com



Professional  
Analytical  
Services

## ANALYSIS REPORT

On-Site Environmental  
14648 NE 95th ST  
Redmond, WA 98052  
Attention: David Baumeister  
SDG Number: 2224790  
Project #: 105474-050  
All results reported on an as received basis.

Date Received: 06/30/22  
Date Reported: 7/ 8/22

---

AMTEST Identification Number 22-A011068  
Client Identification FL358-MW7-220629  
Sampling Date 06/29/22, 11:00

### Demand

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
BOD	< 2	mg/l		2	SM 5210B	JM	07/01/22

---

AMTEST Identification Number 22-A011069  
Client Identification FL358-MW14-220629  
Sampling Date 06/29/22, 12:40

### Demand

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
BOD	3.0	mg/l		2	SM 5210B	JM	07/01/22

On-Site Environmental  
Project Name:  
AmTest ID: 22-A011070

---

**AMTEST Identification Number**      22-A011070  
**Client Identification**                FL358-MW12-220629  
**Sampling Date**                         06/29/22, 15:15

**Demand**

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
BOD	7.8	mg/l		2	SM 5210B	JM	07/01/22

  
\_\_\_\_\_  
Aaron W. Young  
Vice President

Am Test Inc.  
13600 NE 126th PL  
Suite C  
Kirkland, WA, 98034  
(425) 885-1664  
www.amtestlab.com



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**QC Summary for sample numbers: 22-A011068 to 22-A011070**

**DUPLICATES**

SAMPLE #	ANALYTE	UNITS	SAMPLE VALUE	DUP VALUE	RPD
22-A011069	BOD	mg/l	3.0	2.4	22.

**BLANKS**

ANALYTE	UNITS	RESULT
BOD	mg/l	< 2



14648 NE 95th Street, Redmond, WA 98052 · (425) 883-3881

Laboratory: AmTest Laboratories

Attention: Aaron Young

13600 NE 126th PI Kirkland, WA 98034

Phone Number: ( 425 ) 885-1664

Turnaround Request

1 Day    2 Day    3 Day

Standard

Other: \_\_\_\_\_

Laboratory Reference #: 06-332

Project Manager: David Baumeister

email: dbaumeister@onsite-env.com

Project Number: 105474-050

Project Name: \_\_\_\_\_

11008  
11009  
11070

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	# of Cont.	Requested Analyses
11008	FL358-MW7-220629	6/29/22	11:00	W	1	BOD 5 SM 5210B
11009	FL358-MW14-220629	6/29/22	12:40	W	1	BOD 5 SM 5210B
11070	FL358-MW12-220629	6/29/22	15:15	W	1	BOD 5 SM 5210B

Relinquished by:	Company	Date	Time	Comments/Special Instructions
<i>[Signature]</i>	<i>AMTEST</i>	<i>6/29/22</i>	<i>3:53 AM</i>	<b>EDDs</b>
Received by: <i>[Signature]</i>	<i>AMTEST</i>	<i>6/30/22</i>	<i>3:55 PM</i>	
Relinquished by:				
Received by:				
Relinquished by:				
Received by:				

P.S

6.10C



3600 Fremont Ave. N.  
Seattle, WA 98103  
T: (206) 352-3790  
F: (206) 352-7178  
info@fremontanalytical.com

**OnSite Environmental Inc**  
David Baumeister  
14648 NE 95th Street  
Redmond, WA 98052

**RE: FL358 Monitoring Well**  
**Work Order Number: 2206509**

July 08, 2022

**Attention David Baumeister:**

Fremont Analytical, Inc. received 3 sample(s) on 6/30/2022 for the analyses presented in the following report.

***Ferrous Iron by SM3500-Fe B***

This report consists of the following:

- Case Narrative
- Analytical Results
- Applicable Quality Control Summary Reports
- Chain of Custody

All analyses were performed consistent with the Quality Assurance program of Fremont Analytical, Inc. Please contact the laboratory if you should have any questions about the results.

Thank you for using Fremont Analytical.

Sincerely,

Brianna Barnes  
Project Manager

*DoD-ELAP Accreditation #79636 by PJLA, ISO/IEC 17025:2017 and QSM 5.3 for Environmental Testing  
ORELAP Certification: WA 100009 (NELAP Recognized) for Environmental Testing  
Washington State Department of Ecology Accredited for Environmental Testing, Lab ID C910*

Original



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**CLIENT:** OnSite Environmental Inc  
**Project:** FL358 Monitoring Well  
**Work Order:** 2206509

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**Work Order Sample Summary**

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<b>Lab Sample ID</b>	<b>Client Sample ID</b>	<b>Date/Time Collected</b>	<b>Date/Time Received</b>
2206509-001	FL358-MW7-220629	06/29/2022 11:00 AM	06/30/2022 9:53 AM
2206509-002	FL358-MW14-220629	06/29/2022 12:40 PM	06/30/2022 9:53 AM
2206509-003	FL358-MW12-220629	06/29/2022 3:15 PM	06/30/2022 9:53 AM

Note: If no "Time Collected" is supplied, a default of 12:00AM is assigned

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**CLIENT:** OnSite Environmental Inc

**Project:** FL358 Monitoring Well

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**I. SAMPLE RECEIPT:**

Samples receipt information is recorded on the attached Sample Receipt Checklist.

**II. GENERAL REPORTING COMMENTS:**

Results are reported on a wet weight basis unless dry-weight correction is denoted in the units field on the analytical report ("mg/kg-dry" or "ug/kg-dry").

Matrix Spike (MS) and MS Duplicate (MSD) samples are tested from an analytical batch of "like" matrix to check for possible matrix effect. The MS and MSD will provide site specific matrix data only for those samples which are spiked by the laboratory. The sample chosen for spike purposes may or may not have been a sample submitted in this sample delivery group. The validity of the analytical procedures for which data is reported in this analytical report is determined by the Laboratory Control Sample (LCS) and the Method Blank (MB). The LCS and the MB are processed with the samples and the MS/MSD to ensure method criteria are achieved throughout the entire analytical process.

**III. ANALYSES AND EXCEPTIONS:**

Exceptions associated with this report will be footnoted in the analytical results page(s) or the quality control summary page(s) and/or noted below.

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Qualifiers:

- \* - Flagged value is not within established control limits
- B - Analyte detected in the associated Method Blank
- D - Dilution was required
- E - Value above quantitation range
- H - Holding times for preparation or analysis exceeded
- I - Analyte with an internal standard that does not meet established acceptance criteria
- J - Analyte detected below Reporting Limit
- N - Tentatively Identified Compound (TIC)
- Q - Analyte with an initial or continuing calibration that does not meet established acceptance criteria
- S - Spike recovery outside accepted recovery limits
- ND - Not detected at the Reporting Limit
- R - High relative percent difference observed

Acronyms:

- %Rec - Percent Recovery
- CCB - Continued Calibration Blank
- CCV - Continued Calibration Verification
- DF - Dilution Factor
- DUP - Sample Duplicate
- HEM - Hexane Extractable Material
- ICV - Initial Calibration Verification
- LCS/LCSD - Laboratory Control Sample / Laboratory Control Sample Duplicate
- MCL - Maximum Contaminant Level
- MB or MBLANK - Method Blank
- MDL - Method Detection Limit
- MS/MSD - Matrix Spike / Matrix Spike Duplicate
- PDS - Post Digestion Spike
- Ref Val - Reference Value
- REP - Sample Replicate
- RL - Reporting Limit
- RPD - Relative Percent Difference
- SD - Serial Dilution
- SGT - Silica Gel Treatment
- SPK - Spike
- Surr - Surrogate



**CLIENT:** OnSite Environmental Inc  
**Project:** FL358 Monitoring Well

**Lab ID:** 2206509-001

**Collection Date:** 6/29/2022 11:00:00 AM

**Client Sample ID:** FL358-MW7-220629

**Matrix:** Water

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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**Ferrous Iron by SM3500-Fe B**

Batch ID: R76692

Analyst: ALT

Ferrous Iron	42.8	12.5	D	mg/L	125	6/30/2022 10:12:00 AM
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**Lab ID:** 2206509-002

**Collection Date:** 6/29/2022 12:40:00 PM

**Client Sample ID:** FL358-MW14-220629

**Matrix:** Water

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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**Ferrous Iron by SM3500-Fe B**

Batch ID: R76692

Analyst: ALT

Ferrous Iron	12.0	2.50	D	mg/L	25	6/30/2022 10:12:00 AM
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**Lab ID:** 2206509-003

**Collection Date:** 6/29/2022 3:15:00 PM

**Client Sample ID:** FL358-MW12-220629

**Matrix:** Water

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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**Ferrous Iron by SM3500-Fe B**

Batch ID: R76692

Analyst: ALT

Ferrous Iron	76.0	12.5	D	mg/L	125	6/30/2022 10:12:00 AM
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**Work Order:** 2206509  
**CLIENT:** OnSite Environmental Inc  
**Project:** FL358 Monitoring Well

**QC SUMMARY REPORT**  
**Ferrous Iron by SM3500-Fe B**

Sample ID: <b>MB-R76692</b>	SampType: <b>MBLK</b>	Units: <b>mg/L</b>	Prep Date: <b>6/30/2022</b>	RunNo: <b>76692</b>							
Client ID: <b>MBLKW</b>	Batch ID: <b>R76692</b>		Analysis Date: <b>6/30/2022</b>	SeqNo: <b>1573777</b>							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Ferrous Iron	ND	0.100									

Sample ID: <b>LCS-R76692</b>	SampType: <b>LCS</b>	Units: <b>mg/L</b>	Prep Date: <b>6/30/2022</b>	RunNo: <b>76692</b>							
Client ID: <b>LCSW</b>	Batch ID: <b>R76692</b>		Analysis Date: <b>6/30/2022</b>	SeqNo: <b>1573778</b>							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Ferrous Iron	0.355	0.100	0.4000	0	88.8	85	115				

Sample ID: <b>2206509-003ADUP</b>	SampType: <b>DUP</b>	Units: <b>mg/L</b>	Prep Date: <b>6/30/2022</b>	RunNo: <b>76692</b>							
Client ID: <b>FL358-MW12-220629</b>	Batch ID: <b>R76692</b>		Analysis Date: <b>6/30/2022</b>	SeqNo: <b>1573782</b>							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Ferrous Iron	80.9	12.5						75.97	6.27	20	D

Sample ID: <b>2206509-003AMS</b>	SampType: <b>MS</b>	Units: <b>mg/L</b>	Prep Date: <b>6/30/2022</b>	RunNo: <b>76692</b>							
Client ID: <b>FL358-MW12-220629</b>	Batch ID: <b>R76692</b>		Analysis Date: <b>6/30/2022</b>	SeqNo: <b>1573783</b>							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Ferrous Iron	132	12.5	50.00	75.97	112	70	130				D

Sample ID: <b>2206509-003AMSD</b>	SampType: <b>MSD</b>	Units: <b>mg/L</b>	Prep Date: <b>6/30/2022</b>	RunNo: <b>76692</b>							
Client ID: <b>FL358-MW12-220629</b>	Batch ID: <b>R76692</b>		Analysis Date: <b>6/30/2022</b>	SeqNo: <b>1573784</b>							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Ferrous Iron	128	12.5	50.00	75.97	104	70	130	132.1	3.15	30	D

Client Name: ONSITE	Work Order Number: 2206509
Logged by: Elisabeth Samoray	Date Received: 6/30/2022 9:53:00 AM

**Chain of Custody**

1. Is Chain of Custody complete?      Yes       No       Not Present
2. How was the sample delivered?      Courier

**Log In**

3. Coolers are present?      Yes       No       NA
4. Shipping container/cooler in good condition?      Yes       No
5. Custody Seals present on shipping container/cooler?  
(Refer to comments for Custody Seals not intact)      Yes       No       Not Present
6. Was an attempt made to cool the samples?      Yes       No       NA
7. Were all items received at a temperature of >2°C to 6°C \*      Yes       No       NA
8. Sample(s) in proper container(s)?      Yes       No
9. Sufficient sample volume for indicated test(s)?      Yes       No
10. Are samples properly preserved?      Yes       No
11. Was preservative added to bottles?      Yes       No       NA
12. Is there headspace in the VOA vials?      Yes       No       NA
13. Did all samples containers arrive in good condition(unbroken)?      Yes       No
14. Does paperwork match bottle labels?      Yes       No
15. Are matrices correctly identified on Chain of Custody?      Yes       No
16. Is it clear what analyses were requested?      Yes       No
17. Were all holding times able to be met?      Yes       No

**Special Handling (if applicable)**

18. Was client notified of all discrepancies with this order?      Yes       No       NA

Person Notified:	<input type="text"/>	Date:	<input type="text"/>
By Whom:	<input type="text"/>	Via:	<input type="checkbox"/> eMail <input type="checkbox"/> Phone <input type="checkbox"/> Fax <input type="checkbox"/> In Person
Regarding:	<input type="text"/>		
Client Instructions:	<input type="text"/>		

19. Additional remarks:

**Item Information**

Item #	Temp °C
Sample 1	1.8

\* Note: DoD/ELAP and TNI require items to be received at 4°C +/- 2°C







14648 NE 95<sup>th</sup> Street, Redmond, WA 98052 • (425) 883-3881

July 14, 2022

Joseph Sawdey  
Shannon & Wilson, Inc.  
400 N 34th Street, Suite 100  
Seattle, WA 98103

Re: Analytical Data for Project 105474-050  
Laboratory Reference No. 2207-005

Dear Joseph:

Enclosed are the analytical results and associated quality control data for samples submitted on July 1, 2022.

The standard policy of OnSite Environmental, Inc. is to store your samples for 30 days from the date of receipt. If you require longer storage, please contact the laboratory.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning the data, or need additional information, please feel free to call me.

Sincerely,

A handwritten signature in black ink, appearing to read "D. Baumeister", with a long horizontal flourish extending to the right.

David Baumeister  
Project Manager

Enclosures



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OnSite Environmental, Inc. 14648 NE 95<sup>th</sup> Street, Redmond, WA 98052 (425) 883-3881

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: July 14, 2022  
Samples Submitted: July 1, 2022  
Laboratory Reference: 2207-005  
Project: 105474-050

### Case Narrative

Samples were collected on June 30, 2022 and received by the laboratory on July 1, 2022. They were maintained at the laboratory at a temperature of 2°C to 6°C.

Please note that any and all soil sample results are reported on a dry-weight basis, unless otherwise noted below.

General QA/QC issues associated with the analytical data enclosed in this laboratory report will be indicated with a reference to a comment or explanation on the Data Qualifier page. More complex and involved QA/QC issues will be discussed in detail below.



Date of Report: July 14, 2022  
 Samples Submitted: July 1, 2022  
 Laboratory Reference: 2207-005  
 Project: 105474-050

### VOLATILE ORGANICS EPA 8260D

Matrix: Water  
 Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>TB-220630</b>					
Laboratory ID:	07-005-01					
Vinyl Chloride	ND	0.20	EPA 8260D	7-7-22	7-7-22	
1,1-Dichloroethene	ND	0.20	EPA 8260D	7-7-22	7-7-22	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260D	7-7-22	7-7-22	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260D	7-7-22	7-7-22	
Trichloroethene	ND	0.20	EPA 8260D	7-7-22	7-7-22	
Tetrachloroethene	ND	0.20	EPA 8260D	7-7-22	7-7-22	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	91	75-127				
<i>Toluene-d8</i>	97	80-127				
<i>4-Bromofluorobenzene</i>	96	78-125				

<b>Client ID:</b>	<b>Rinsate-220630</b>					
Laboratory ID:	07-005-02					
Vinyl Chloride	ND	0.20	EPA 8260D	7-7-22	7-7-22	
1,1-Dichloroethene	ND	0.20	EPA 8260D	7-7-22	7-7-22	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260D	7-7-22	7-7-22	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260D	7-7-22	7-7-22	
Trichloroethene	ND	0.20	EPA 8260D	7-7-22	7-7-22	
Tetrachloroethene	0.22	0.20	EPA 8260D	7-7-22	7-7-22	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	89	75-127				
<i>Toluene-d8</i>	96	80-127				
<i>4-Bromofluorobenzene</i>	96	78-125				

<b>Client ID:</b>	<b>FL358-MW6-220630</b>					
Laboratory ID:	07-005-03					
Vinyl Chloride	1.5	1.0	EPA 8260D	7-7-22	7-7-22	
1,1-Dichloroethene	ND	1.0	EPA 8260D	7-7-22	7-7-22	
(trans) 1,2-Dichloroethene	ND	1.0	EPA 8260D	7-7-22	7-7-22	
(cis) 1,2-Dichloroethene	86	1.0	EPA 8260D	7-7-22	7-7-22	
Trichloroethene	100	1.0	EPA 8260D	7-7-22	7-7-22	
Tetrachloroethene	38	1.0	EPA 8260D	7-7-22	7-7-22	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	91	75-127				
<i>Toluene-d8</i>	100	80-127				
<i>4-Bromofluorobenzene</i>	99	78-125				



Date of Report: July 14, 2022  
 Samples Submitted: July 1, 2022  
 Laboratory Reference: 2207-005  
 Project: 105474-050

### VOLATILE ORGANICS EPA 8260D

Matrix: Water  
 Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>FL358-MW5A-220630</b>					
Laboratory ID:	07-005-04					
Vinyl Chloride	2.3	1.0	EPA 8260D	7-7-22	7-7-22	
1,1-Dichloroethene	ND	1.0	EPA 8260D	7-7-22	7-7-22	
(trans) 1,2-Dichloroethene	ND	1.0	EPA 8260D	7-7-22	7-7-22	
(cis) 1,2-Dichloroethene	37	1.0	EPA 8260D	7-7-22	7-7-22	
Trichloroethene	50	1.0	EPA 8260D	7-7-22	7-7-22	
Tetrachloroethene	91	1.0	EPA 8260D	7-7-22	7-7-22	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	89	75-127				
<i>Toluene-d8</i>	96	80-127				
<i>4-Bromofluorobenzene</i>	96	78-125				

<b>Client ID:</b>	<b>FL358-MW5B-220630</b>					
Laboratory ID:	07-005-05					
Vinyl Chloride	ND	0.20	EPA 8260D	7-7-22	7-7-22	
1,1-Dichloroethene	ND	0.20	EPA 8260D	7-7-22	7-7-22	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260D	7-7-22	7-7-22	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260D	7-7-22	7-7-22	
Trichloroethene	0.83	0.20	EPA 8260D	7-7-22	7-7-22	
Tetrachloroethene	3.4	0.20	EPA 8260D	7-7-22	7-7-22	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	89	75-127				
<i>Toluene-d8</i>	97	80-127				
<i>4-Bromofluorobenzene</i>	98	78-125				



Date of Report: July 14, 2022  
 Samples Submitted: July 1, 2022  
 Laboratory Reference: 2207-005  
 Project: 105474-050

**VOLATILE ORGANICS EPA 8260D  
 QUALITY CONTROL**

Matrix: Water  
 Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>METHOD BLANK</b>						
Laboratory ID:	MB0707W1					
Vinyl Chloride	ND	0.20	EPA 8260D	7-7-22	7-7-22	
1,1-Dichloroethene	ND	0.20	EPA 8260D	7-7-22	7-7-22	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260D	7-7-22	7-7-22	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260D	7-7-22	7-7-22	
Trichloroethene	ND	0.20	EPA 8260D	7-7-22	7-7-22	
Tetrachloroethene	ND	0.20	EPA 8260D	7-7-22	7-7-22	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	91	75-127				
<i>Toluene-d8</i>	97	80-127				
<i>4-Bromofluorobenzene</i>	97	78-125				

Analyte	Result		Spike Level		Source Result	Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
<b>MATRIX SPIKES</b>											
Laboratory ID:	07-005-03										
	MS	MSD	MS	MSD		MS	MSD				
1,1-Dichloroethene	44.9	46.6	50.0	50.0	ND	90	93	76-124	4	15	
Benzene	42.7	43.9	50.0	50.0	ND	85	88	74-122	3	16	
Trichloroethene	149	152	50.0	50.0	102	94	100	79-129	2	17	
Toluene	41.5	43.3	50.0	50.0	ND	83	87	80-120	4	19	
Chlorobenzene	43.1	44.4	50.0	50.0	ND	86	89	78-120	3	16	
<i>Surrogate:</i>											
<i>Dibromofluoromethane</i>						97	95	75-127			
<i>Toluene-d8</i>						100	98	80-127			
<i>4-Bromofluorobenzene</i>						103	101	78-125			



Date of Report: July 14, 2022  
 Samples Submitted: July 1, 2022  
 Laboratory Reference: 2207-005  
 Project: 105474-050

**AMMONIA (as Nitrogen)**  
**SM 4500-NH<sub>3</sub> D**

Matrix: Water  
 Units: mg/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>FL358-MW6-220630</b>					
Laboratory ID:	07-005-03					
Ammonia	<b>0.10</b>	0.050	SM 4500-NH3 D	7-14-22	7-14-22	

<b>Client ID:</b>	<b>FL358-MW5A-220630</b>					
Laboratory ID:	07-005-04					
Ammonia	<b>0.10</b>	0.050	SM 4500-NH3 D	7-14-22	7-14-22	

<b>Client ID:</b>	<b>FL358-MW5B-220630</b>					
Laboratory ID:	07-005-05					
Ammonia	<b>0.079</b>	0.050	SM 4500-NH3 D	7-14-22	7-14-22	



Date of Report: July 14, 2022  
 Samples Submitted: July 1, 2022  
 Laboratory Reference: 2207-005  
 Project: 105474-050

**AMMONIA (as Nitrogen)  
 SM 4500-NH<sub>3</sub> D  
 QUALITY CONTROL**

Matrix: Water  
 Units: mg/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>METHOD BLANK</b>						
Laboratory ID:	MB0714W1					
Ammonia	<b>ND</b>	0.050	SM 4500-NH3 D	7-14-22	7-14-22	

Analyte	Result	Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
<b>DUPLICATE</b>								
Laboratory ID:	07-005-03							
	ORIG	DUP						
Ammonia	<b>0.102</b>	<b>0.0901</b>	NA	NA	NA	NA	12	15

<b>MATRIX SPIKE</b>								
Laboratory ID:	07-005-03							
	MS	MS		MS				
Ammonia	<b>4.84</b>	5.00	0.102	95	87-110	NA	NA	

<b>SPIKE BLANK</b>								
Laboratory ID:	SB0714W1							
	SB	SB		SB				
Ammonia	<b>4.78</b>	5.00	NA	96	88-110	NA	NA	



Date of Report: July 14, 2022  
 Samples Submitted: July 1, 2022  
 Laboratory Reference: 2207-005  
 Project: 105474-050

**NITRATE (as Nitrogen)**  
**EPA 353.2**

Matrix: Water  
 Units: mg/L-N

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>FL358-MW6-220630</b>					
Laboratory ID:	07-005-03					
Nitrate	<b>ND</b>	0.050	EPA 353.2	7-5-22	7-5-22	

<b>Client ID:</b>	<b>FL358-MW5A-220630</b>					
Laboratory ID:	07-005-04					
Nitrate	<b>ND</b>	0.050	EPA 353.2	7-5-22	7-5-22	

<b>Client ID:</b>	<b>FL358-MW5B-220630</b>					
Laboratory ID:	07-005-05					
Nitrate	<b>ND</b>	0.050	EPA 353.2	7-5-22	7-5-22	



Date of Report: July 14, 2022  
 Samples Submitted: July 1, 2022  
 Laboratory Reference: 2207-005  
 Project: 105474-050

**NITRATE (as Nitrogen)**  
**EPA 353.2**  
**QUALITY CONTROL**

Matrix: Water  
 Units: mg/L-N

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>METHOD BLANK</b>						
Laboratory ID:	MB0705W1					
Nitrate	ND	0.050	EPA 353.2	7-5-22	7-5-22	

Analyte	Result	Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
<b>DUPLICATE</b>								
Laboratory ID:	07-005-03							
	ORIG	DUP						
Nitrate	ND	ND	NA	NA	NA	NA	10	

<b>MATRIX SPIKE</b>								
Laboratory ID:	07-005-03							
	MS	MS		MS				
Nitrate	2.08	2.00	ND	104	88-125	NA	NA	

<b>SPIKE BLANK</b>								
Laboratory ID:	SB0705W1							
	SB	SB		SB				
Nitrate	1.97	2.00	NA	99	90-120	NA	NA	



Date of Report: July 14, 2022  
 Samples Submitted: July 1, 2022  
 Laboratory Reference: 2207-005  
 Project: 105474-050

**NITRITE (as Nitrogen)**  
**EPA 353.2**

Matrix: Water  
 Units: mg/L-N

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>FL358-MW6-220630</b>					
Laboratory ID:	07-005-03					
Nitrite	<b>ND</b>	0.020	EPA 353.2	7-1-22	7-1-22	

<b>Client ID:</b>	<b>FL358-MW5A-220630</b>					
Laboratory ID:	07-005-04					
Nitrite	<b>ND</b>	0.020	EPA 353.2	7-1-22	7-1-22	

<b>Client ID:</b>	<b>FL358-MW5B-220630</b>					
Laboratory ID:	07-005-05					
Nitrite	<b>ND</b>	0.020	EPA 353.2	7-1-22	7-1-22	



Date of Report: July 14, 2022  
 Samples Submitted: July 1, 2022  
 Laboratory Reference: 2207-005  
 Project: 105474-050

**NITRITE (as Nitrogen)**  
**EPA 353.2**  
**QUALITY CONTROL**

Matrix: Water  
 Units: mg/L-N

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>METHOD BLANK</b>						
Laboratory ID:	MB0701W1					
Nitrite	<b>ND</b>	0.020	EPA 353.2	7-1-22	7-1-22	

Analyte	Result	Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
<b>DUPLICATE</b>								
Laboratory ID:	07-005-03							
	ORIG	DUP						
Nitrite	<b>ND</b>	<b>ND</b>	NA	NA	NA	NA	11	

<b>MATRIX SPIKE</b>								
Laboratory ID:	07-005-03							
	MS	MS		MS				
Nitrite	<b>0.250</b>	0.250	ND	100	83-117	NA	NA	

<b>SPIKE BLANK</b>								
Laboratory ID:	SB0701W1							
	SB	SB		SB				
Nitrite	<b>0.258</b>	0.250	NA	103	91-112	NA	NA	



Date of Report: July 14, 2022  
 Samples Submitted: July 1, 2022  
 Laboratory Reference: 2207-005  
 Project: 105474-050

**TOTAL ORGANIC CARBON  
 SM 5310B**

Matrix: Water  
 Units: mg/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>FL358-MW6-220630</b>					
Laboratory ID:	07-005-03					
Total Organic Carbon	<b>8.3</b>	1.0	SM 5310B	7-12-22	7-12-22	

<b>Client ID:</b>	<b>FL358-MW5A-220630</b>					
Laboratory ID:	07-005-04					
Total Organic Carbon	<b>8.2</b>	1.0	SM 5310B	7-12-22	7-12-22	

<b>Client ID:</b>	<b>FL358-MW5B-220630</b>					
Laboratory ID:	07-005-05					
Total Organic Carbon	<b>4.9</b>	1.0	SM 5310B	7-12-22	7-12-22	



Date of Report: July 14, 2022  
 Samples Submitted: July 1, 2022  
 Laboratory Reference: 2207-005  
 Project: 105474-050

**TOTAL ORGANIC CARBON  
 SM 5310B  
 QUALITY CONTROL**

Matrix: Water  
 Units: mg/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>METHOD BLANK</b>						
Laboratory ID:	MB0712W2					
Total Organic Carbon	<b>ND</b>	1.0	SM 5310B	7-12-22	7-12-22	

Analyte	Result	Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
<b>DUPLICATE</b>								
Laboratory ID:	06-308-03							
	ORIG	DUP						
Total Organic Carbon	<b>4.40</b>	<b>4.45</b>	NA	NA	NA	1	12	

**MATRIX SPIKE**

Laboratory ID:	06-308-03							
	MS	MS		MS				
Total Organic Carbon	<b>13.9</b>		10.0	4.40	95	80-120	NA	NA

**SPIKE BLANK**

Laboratory ID:	SB0712W2							
	SB	SB		SB				
Total Organic Carbon	<b>9.82</b>		10.0	NA	98	80-118	NA	NA



Date of Report: July 14, 2022  
 Samples Submitted: July 1, 2022  
 Laboratory Reference: 2207-005  
 Project: 105474-050

**TOTAL IRON  
 EPA 6010D**

Matrix: Water  
 Units: ug/L (ppb)

<b>Analyte</b>	<b>Result</b>	<b>PQL</b>	<b>Method</b>	<b>Date Prepared</b>	<b>Date Analyzed</b>	<b>Flags</b>
<b>Client ID:</b>	<b>FL358-MW6-220630</b>					
Laboratory ID:	07-005-03					
Iron	<b>430</b>	50	EPA 6010D	7-5-22	7-5-22	

<b>Client ID:</b>	<b>FL358-MW5A-220630</b>					
Laboratory ID:	07-005-04					
Iron	<b>560</b>	50	EPA 6010D	7-5-22	7-5-22	

<b>Client ID:</b>	<b>FL358-MW5B-220630</b>					
Laboratory ID:	07-005-05					
Iron	<b>120</b>	50	EPA 6010D	7-5-22	7-5-22	



Date of Report: July 14, 2022  
 Samples Submitted: July 1, 2022  
 Laboratory Reference: 2207-005  
 Project: 105474-050

**TOTAL IRON  
 EPA 6010D  
 QUALITY CONTROL**

Matrix: Water  
 Units: ug/L (ppb)

<b>Analyte</b>	<b>Result</b>	<b>PQL</b>	<b>Method</b>	<b>Date Prepared</b>	<b>Date Analyzed</b>	<b>Flags</b>
<b>METHOD BLANK</b>						
Laboratory ID:	MB0705WH1					
Iron	<b>ND</b>	50	EPA 6010D	7-5-22	7-5-22	

<b>Analyte</b>	<b>Result</b>	<b>Spike Level</b>	<b>Source Result</b>	<b>Percent Recovery</b>	<b>Recovery Limits</b>	<b>RPD</b>	<b>RPD Limit</b>	<b>Flags</b>
<b>DUPLICATE</b>								
Laboratory ID:	06-292-03							
	ORIG	DUP						
Iron	<b>46000</b>	<b>44500</b>	NA	NA	NA	NA	3	20

**MATRIX SPIKES**

Laboratory ID:	06-292-03									
	MS	MSD	MS	MSD		MS	MSD			
Iron	<b>65700</b>	<b>66800</b>	20000	20000	46000	<b>99</b>	<b>104</b>	75-125	2	20



Date of Report: July 14, 2022  
 Samples Submitted: July 1, 2022  
 Laboratory Reference: 2207-005  
 Project: 105474-050

**DISSOLVED GASES  
RSK 175**

Matrix: Water  
 Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>FL358-MW6-220630</b>					
Laboratory ID:	07-005-03					
Methane	<b>2000</b>	17	RSK 175	7-12-22	7-12-22	
Ethane	<b>ND</b>	0.22	RSK 175	7-12-22	7-12-22	
Ethene	<b>ND</b>	0.29	RSK 175	7-12-22	7-12-22	
Acetylene	<b>8.7</b>	1.2	RSK 175	7-12-22	7-12-22	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>1-Butene</i>	<i>71</i>	<i>70-130</i>				

<b>Client ID:</b>	<b>FL358-MW5A-220630</b>					
Laboratory ID:	07-005-04					
Methane	<b>1400</b>	8.3	RSK 175	7-12-22	7-12-22	
Ethane	<b>ND</b>	0.22	RSK 175	7-12-22	7-12-22	
Ethene	<b>0.79</b>	0.29	RSK 175	7-12-22	7-12-22	
Acetylene	<b>9.5</b>	1.2	RSK 175	7-12-22	7-12-22	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>1-Butene</i>	<i>72</i>	<i>70-130</i>				

<b>Client ID:</b>	<b>FL358-MW5B-220630</b>					
Laboratory ID:	07-005-05					
Methane	<b>100</b>	0.55	RSK 175	7-12-22	7-12-22	
Ethane	<b>ND</b>	0.22	RSK 175	7-12-22	7-12-22	
Ethene	<b>ND</b>	0.29	RSK 175	7-12-22	7-12-22	
Acetylene	<b>ND</b>	1.2	RSK 175	7-12-22	7-12-22	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>1-Butene</i>	<i>80</i>	<i>70-130</i>				



Date of Report: July 14, 2022  
 Samples Submitted: July 1, 2022  
 Laboratory Reference: 2207-005  
 Project: 105474-050

**DISSOLVED GASES  
 RSK 175  
 QUALITY CONTROL**

Matrix: Water  
 Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>METHOD BLANK</b>						
Laboratory ID:	MB0712W1					
Methane	ND	0.55	RSK 175	7-12-22	7-12-22	
Ethane	ND	0.22	RSK 175	7-12-22	7-12-22	
Ethene	ND	0.29	RSK 175	7-12-22	7-12-22	
Acetylene	ND	1.2	RSK 175	7-12-22	7-12-22	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
1-Butene	99	70-130				

Analyte	Result		Spike Level		Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags	
<b>MATRIX SPIKES</b>											
Laboratory ID:	07-005-03										
	MS	MSD	MS	MSD		MS	MSD				
Methane	1990	1940	44.2	44.2	2000	NA	NA	75-125	3	25	A, E
Ethane	34.5	37.2	83.2	83.2	ND	42	45	75-125	8	25	I, I
Ethene	42.4	42.1	77.7	77.7	ND	55	54	75-125	1	25	I, I
Acetylene	53.9	53.1	72.0	72.0	8.65	63	62	75-125	1	25	I, I
<i>Surrogate:</i>											
1-Butene						31	32	70-130			





### Data Qualifiers and Abbreviations

- A - Due to a high sample concentration, the amount spiked is insufficient for meaningful MS/MSD recovery data.
  - B - The analyte indicated was also found in the blank sample.
  - C - The duplicate RPD is outside control limits due to high result variability when analyte concentrations are within five times the quantitation limit.
  - E - The value reported exceeds the quantitation range and is an estimate.
  - F - Surrogate recovery data is not available due to the high concentration of coeluting target compounds.
  - H - The analyte indicated is a common laboratory solvent and may have been introduced during sample preparation, and be impacting the sample result.
  - I - Compound recovery is outside of the control limits.
  - J - The value reported was below the practical quantitation limit. The value is an estimate.
  - K - Sample duplicate RPD is outside control limits due to sample inhomogeneity. The sample was re-extracted and re-analyzed with similar results.
  - L - The RPD is outside of the control limits.
  - M - Hydrocarbons in the gasoline range are impacting the diesel range result.
  - M1 - Hydrocarbons in the gasoline range (toluene-naphthalene) are present in the sample.
  - N - Hydrocarbons in the lube oil range are impacting the diesel range result.
  - N1 - Hydrocarbons in diesel range are impacting lube oil range results.
  - O - Hydrocarbons indicative of heavier fuels are present in the sample and are impacting the gasoline result.
  - P - The RPD of the detected concentrations between the two columns is greater than 40.
  - Q - Surrogate recovery is outside of the control limits.
  - S - Surrogate recovery data is not available due to the necessary dilution of the sample.
  - T - The sample chromatogram is not similar to a typical \_\_\_\_\_.
  - U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.
  - U1 - The practical quantitation limit is elevated due to interferences present in the sample.
  - V - Matrix Spike/Matrix Spike Duplicate recoveries are outside control limits due to matrix effects.
  - W - Matrix Spike/Matrix Spike Duplicate RPD are outside control limits due to matrix effects.
  - X - Sample extract treated with a mercury cleanup procedure.
  - X1 - Sample extract treated with a sulfuric acid/silica gel cleanup procedure.
  - X2 - Sample extract treated with a silica gel cleanup procedure.
  - Y - The calibration verification for this analyte exceeded the 20% drift specified in methods 8260 & 8270, and therefore the reported result should be considered an estimate. The overall performance of the calibration verification standard met the acceptance criteria of the method.
  - Y1 - Negative effects of the matrix from this sample on the instrument caused values for this analyte in the bracketing continuing calibration verification standard (CCVs) to be outside of 20% acceptance criteria. Because of this, quantitation limits and sample concentrations should be considered estimates.
  - Z -
- ND - Not Detected at PQL  
 PQL - Practical Quantitation Limit  
 RPD - Relative Percent Difference





Am Test Inc.  
13600 NE 126TH PL  
Suite C  
Kirkland, WA 98034  
(425) 885-1664

Professional  
Analytical  
Services

Jul 8 2022  
On-Site Environmental  
14648 NE 95th ST  
Redmond, WA 98052  
Attention: David Baumeister

Dear David Baumeister:

Enclosed please find the analytical data for your project.

The following is a cross correlation of client and laboratory identifications for your convenience.

CLIENT ID	MATRIX	AMTEST ID	TEST
FL358-MW6-220630	Water	22-A011107	DEM
FL358-MW5A-220630	Water	22-A011108	DEM
FL358-MW5B-220630	Water	22-A011109	DEM

Your samples were received on Friday, July 1, 2022. At the time of receipt, the samples were logged in and properly maintained prior to the subsequent analysis.

The analytical procedures used at AmTest are well documented and are typically derived from the protocols of the EPA, USDA, FDA or the Army Corps of Engineers.

Following the analytical data you will find the Quality Control (QC) results.

Please note that the detection limits that are listed in the body of the report refer to the Practical Quantitation Limits (PQL's), as opposed to the Method Detection Limits (MDL's).

If you should have any questions pertaining to the data package, please feel free to contact me.

Sincerely,

  
Aaron W. Young  
Vice President

Project #: 105474-050  
SDG #: 2224800

BACT = Bacteriological  
CONV = Conventionals

MET = Metals  
ORG = Organics

NUT=Nutrients  
DEM=Demand

MIN=Minerals

Am Test Inc.  
13600 NE 126TH PL  
Suite C  
Kirkland, WA 98034  
(425) 885-1664  
www.amtestlab.com



Professional  
Analytical  
Services

## ANALYSIS REPORT

On-Site Environmental  
14648 NE 95th ST  
Redmond, WA 98052  
Attention: David Baumeister  
SDG Number: 2224800  
Project #: 105474-050  
All results reported on an as received basis.

Date Received: 07/01/22  
Date Reported: 7/ 8/22

---

AMTEST Identification Number 22-A011107  
Client Identification FL358-MW6-220630  
Sampling Date 06/30/22, 11:00

### Demand

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
BOD	3.0	mg/l		2	SM 5210B	JM	07/01/22

---

AMTEST Identification Number 22-A011108  
Client Identification FL358-MW5A-220630  
Sampling Date 06/30/22, 12:10

### Demand

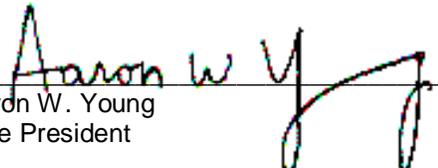
PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
BOD	2.5	mg/l		2	SM 5210B	JM	07/01/22

On-Site Environmental  
Project Name:  
AmTest ID: 22-A011109

**AMTEST Identification Number**      22-A011109  
**Client Identification**                FL358-MW5B-220630  
**Sampling Date**                         06/30/22, 13:35

**Demand**

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
BOD	< 2	mg/l		2	SM 5210B	JM	07/01/22

  
\_\_\_\_\_  
Aaron W. Young  
Vice President

Am Test Inc.  
13600 NE 126th PL  
Suite C  
Kirkland, WA, 98034  
(425) 885-1664  
www.amtestlab.com



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**QC Summary for sample numbers: 22-A011107 to 22-A011109**

**DUPLICATES**

SAMPLE #	ANALYTE	UNITS	SAMPLE VALUE	DUP VALUE	RPD
22-A011069	BOD	mg/l	3.0	2.4	22.

**BLANKS**

ANALYTE	UNITS	RESULT
BOD	mg/l	< 2





3600 Fremont Ave. N.  
Seattle, WA 98103  
T: (206) 352-3790  
F: (206) 352-7178  
info@fremontanalytical.com

**OnSite Environmental Inc**  
David Baumeister  
14648 NE 95th Street  
Redmond, WA 98052

**RE: 105474.050**  
**Work Order Number: 2207002**

July 08, 2022

**Attention David Baumeister:**

Fremont Analytical, Inc. received 3 sample(s) on 7/1/2022 for the analyses presented in the following report.

***Ferrous Iron by SM3500-Fe B***

This report consists of the following:

- Case Narrative
- Analytical Results
- Applicable Quality Control Summary Reports
- Chain of Custody

All analyses were performed consistent with the Quality Assurance program of Fremont Analytical, Inc. Please contact the laboratory if you should have any questions about the results.

Thank you for using Fremont Analytical.

Sincerely,

Brianna Barnes  
Project Manager

*DoD-ELAP Accreditation #79636 by PJLA, ISO/IEC 17025:2017 and QSM 5.3 for Environmental Testing  
ORELAP Certification: WA 100009 (NELAP Recognized) for Environmental Testing  
Washington State Department of Ecology Accredited for Environmental Testing, Lab ID C910*

Original

[www.fremontanalytical.com](http://www.fremontanalytical.com)



---

**CLIENT:** OnSite Environmental Inc  
**Project:** 105474.050  
**Work Order:** 2207002

---

**Work Order Sample Summary**

---

<b>Lab Sample ID</b>	<b>Client Sample ID</b>	<b>Date/Time Collected</b>	<b>Date/Time Received</b>
2207002-001	FL358-MW6-220630	06/30/2022 11:00 AM	07/01/2022 9:23 AM
2207002-002	FL358-MW5A-220630	06/30/2022 12:10 PM	07/01/2022 9:23 AM
2207002-003	FL358-MW5B-220630	06/30/2022 1:35 PM	07/01/2022 9:23 AM

Note: If no "Time Collected" is supplied, a default of 12:00AM is assigned

---

**CLIENT:** OnSite Environmental Inc

**Project:** 105474.050

---

**I. SAMPLE RECEIPT:**

Samples receipt information is recorded on the attached Sample Receipt Checklist.

**II. GENERAL REPORTING COMMENTS:**

Results are reported on a wet weight basis unless dry-weight correction is denoted in the units field on the analytical report ("mg/kg-dry" or "ug/kg-dry").

Matrix Spike (MS) and MS Duplicate (MSD) samples are tested from an analytical batch of "like" matrix to check for possible matrix effect. The MS and MSD will provide site specific matrix data only for those samples which are spiked by the laboratory. The sample chosen for spike purposes may or may not have been a sample submitted in this sample delivery group. The validity of the analytical procedures for which data is reported in this analytical report is determined by the Laboratory Control Sample (LCS) and the Method Blank (MB). The LCS and the MB are processed with the samples and the MS/MSD to ensure method criteria are achieved throughout the entire analytical process.

**III. ANALYSES AND EXCEPTIONS:**

Exceptions associated with this report will be footnoted in the analytical results page(s) or the quality control summary page(s) and/or noted below.

---

Qualifiers:

- \* - Flagged value is not within established control limits
- B - Analyte detected in the associated Method Blank
- D - Dilution was required
- E - Value above quantitation range
- H - Holding times for preparation or analysis exceeded
- I - Analyte with an internal standard that does not meet established acceptance criteria
- J - Analyte detected below Reporting Limit
- N - Tentatively Identified Compound (TIC)
- Q - Analyte with an initial or continuing calibration that does not meet established acceptance criteria
- S - Spike recovery outside accepted recovery limits
- ND - Not detected at the Reporting Limit
- R - High relative percent difference observed

Acronyms:

- %Rec - Percent Recovery
- CCB - Continued Calibration Blank
- CCV - Continued Calibration Verification
- DF - Dilution Factor
- DUP - Sample Duplicate
- HEM - Hexane Extractable Material
- ICV - Initial Calibration Verification
- LCS/LCSD - Laboratory Control Sample / Laboratory Control Sample Duplicate
- MCL - Maximum Contaminant Level
- MB or MBLANK - Method Blank
- MDL - Method Detection Limit
- MS/MSD - Matrix Spike / Matrix Spike Duplicate
- PDS - Post Digestion Spike
- Ref Val - Reference Value
- REP - Sample Replicate
- RL - Reporting Limit
- RPD - Relative Percent Difference
- SD - Serial Dilution
- SGT - Silica Gel Treatment
- SPK - Spike
- Surr - Surrogate



**CLIENT:** OnSite Environmental Inc  
**Project:** 105474.050

**Lab ID:** 2207002-001

**Collection Date:** 6/30/2022 11:00:00 AM

**Client Sample ID:** FL358-MW6-220630

**Matrix:** Water

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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**Ferrous Iron by SM3500-Fe B**

Batch ID: R76704 Analyst: ALT

Ferrous Iron	0.588	0.100		mg/L	1	7/1/2022 10:27:00 AM
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**Lab ID:** 2207002-002

**Collection Date:** 6/30/2022 12:10:00 PM

**Client Sample ID:** FL358-MW5A-220630

**Matrix:** Water

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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**Ferrous Iron by SM3500-Fe B**

Batch ID: R76704 Analyst: ALT

Ferrous Iron	0.690	0.100		mg/L	1	7/1/2022 10:27:00 AM
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**Lab ID:** 2207002-003

**Collection Date:** 6/30/2022 1:35:00 PM

**Client Sample ID:** FL358-MW5B-220630

**Matrix:** Water

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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**Ferrous Iron by SM3500-Fe B**

Batch ID: R76704 Analyst: ALT

Ferrous Iron	ND	0.100		mg/L	1	7/1/2022 10:27:00 AM
--------------	----	-------	--	------	---	----------------------

Work Order: 2207002  
 CLIENT: OnSite Environmental Inc  
 Project: 105474.050

**QC SUMMARY REPORT**  
**Ferrous Iron by SM3500-Fe B**

Sample ID: <b>MB-R76704</b>	SampType: <b>MBLK</b>	Units: <b>mg/L</b>	Prep Date: <b>7/1/2022</b>	RunNo: <b>76704</b>							
Client ID: <b>MBLKW</b>	Batch ID: <b>R76704</b>	Analysis Date: <b>7/1/2022</b>	SeqNo: <b>1574141</b>								
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Ferrous Iron	ND	0.100									

Sample ID: <b>LCS-R76704</b>	SampType: <b>LCS</b>	Units: <b>mg/L</b>	Prep Date: <b>7/1/2022</b>	RunNo: <b>76704</b>							
Client ID: <b>LCSW</b>	Batch ID: <b>R76704</b>	Analysis Date: <b>7/1/2022</b>	SeqNo: <b>1574142</b>								
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Ferrous Iron	0.395	0.100	0.4000	0	98.7	85	115				

Sample ID: <b>2207002-002ADUP</b>	SampType: <b>DUP</b>	Units: <b>mg/L</b>	Prep Date: <b>7/1/2022</b>	RunNo: <b>76704</b>							
Client ID: <b>FL358-MW5A-220630</b>	Batch ID: <b>R76704</b>	Analysis Date: <b>7/1/2022</b>	SeqNo: <b>1574145</b>								
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Ferrous Iron	0.657	0.100						0.6898	4.87	20	

Sample ID: <b>2207002-002AMS</b>	SampType: <b>MS</b>	Units: <b>mg/L</b>	Prep Date: <b>7/1/2022</b>	RunNo: <b>76704</b>							
Client ID: <b>FL358-MW5A-220630</b>	Batch ID: <b>R76704</b>	Analysis Date: <b>7/1/2022</b>	SeqNo: <b>1574146</b>								
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Ferrous Iron	1.17	0.100	0.4000	0.6898	120	70	130				

Sample ID: <b>2207002-002AMSD</b>	SampType: <b>MSD</b>	Units: <b>mg/L</b>	Prep Date: <b>7/1/2022</b>	RunNo: <b>76704</b>							
Client ID: <b>FL358-MW5A-220630</b>	Batch ID: <b>R76704</b>	Analysis Date: <b>7/1/2022</b>	SeqNo: <b>1574147</b>								
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Ferrous Iron	1.29	0.100	0.4000	0.6898	150	70	130	1.168	9.87	30	S

**NOTES:**

S - Outlying spike recovery(ies) observed. A duplicate analysis was performed and recovered within range.

Client Name: ONSITE	Work Order Number: 2207002
Logged by: Clare Griggs	Date Received: 7/1/2022 9:23:00 AM

**Chain of Custody**

1. Is Chain of Custody complete?      Yes       No       Not Present
2. How was the sample delivered?      Courier

**Log In**

3. Coolers are present?      Yes       No       NA
4. Shipping container/cooler in good condition?      Yes       No
5. Custody Seals present on shipping container/cooler?  
(Refer to comments for Custody Seals not intact)      Yes       No       Not Present
6. Was an attempt made to cool the samples?      Yes       No       NA
7. Were all items received at a temperature of >2°C to 6°C \*      Yes       No       NA
8. Sample(s) in proper container(s)?      Yes       No
9. Sufficient sample volume for indicated test(s)?      Yes       No
10. Are samples properly preserved?      Yes       No
11. Was preservative added to bottles?      Yes       No       NA
12. Is there headspace in the VOA vials?      Yes       No       NA
13. Did all samples containers arrive in good condition(unbroken)?      Yes       No
14. Does paperwork match bottle labels?      Yes       No
15. Are matrices correctly identified on Chain of Custody?      Yes       No
16. Is it clear what analyses were requested?      Yes       No
17. Were all holding times able to be met?      Yes       No

**Special Handling (if applicable)**

18. Was client notified of all discrepancies with this order?      Yes       No       NA

Person Notified:	<input type="text"/>	Date:	<input type="text"/>
By Whom:	<input type="text"/>	Via:	<input type="checkbox"/> eMail <input type="checkbox"/> Phone <input type="checkbox"/> Fax <input type="checkbox"/> In Person
Regarding:	<input type="text"/>		
Client Instructions:	<input type="text"/>		

19. Additional remarks:

**Item Information**

Item #	Temp °C
Sample	1.3

\* Note: DoD/ELAP and TNI require items to be received at 4°C +/- 2°C

# Chain of Custody

Company: onsite Environmental  
Project Number: 106474-050  
Project Name: FL 358 Monitoring Wells  
Project Manager: David Baumeister  
Sampled by: MKH & JXS

**Turnaround Request (in working days)**

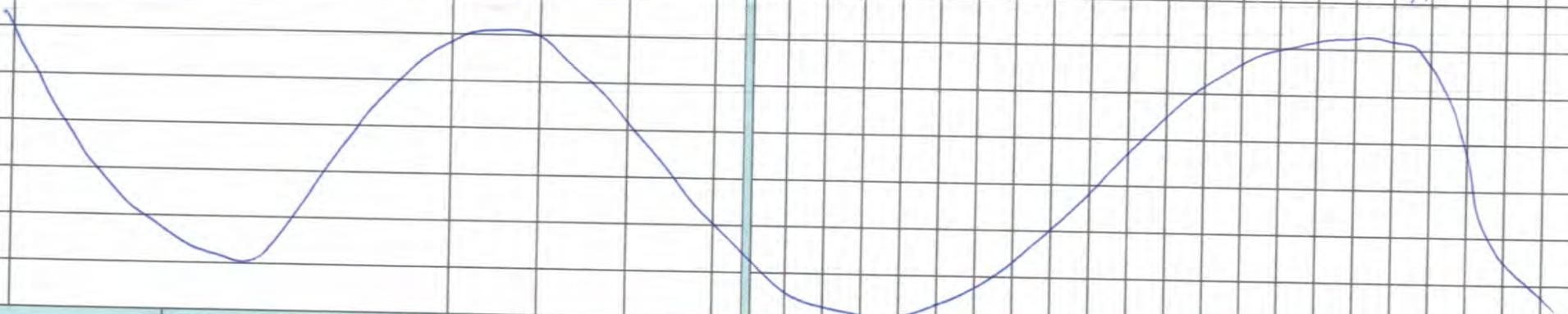
(Check One)

Same Day     1 Day  
 2 Days     3 Days  
 Standard (7 Days)  
 \_\_\_\_\_ (other)

Laboratory Number: 2207002

Lab ID	Sample Identification	Date		Matrix	Number of Containers
		Sampled	Time Sampled		
	<u>FL358-MW6-220630</u>	<u>6/30/22</u>	<u>1100</u>	<u>Water</u>	<u>1</u>
	<u>FL358-MW5A-220630</u>	<u>↓</u>	<u>1210</u>	<u>↓</u>	<u>1</u>
	<u>FL358-MW5B-220630</u>	<u>↓</u>	<u>1335</u>	<u>↓</u>	<u>1</u>

NWTPH-HCID	NWTPH-Gx/BTEX (8021) <input type="checkbox"/> 8260 <input type="checkbox"/>	NWTPH-Gx	NWTPH-Dx (Acid / SG Clean-up) <input type="checkbox"/>	Volatiles 8260	Halogenated Volatiles 8260	EDB EPA 8011 (Waters Only)	Semivolatiles 8270/SIM (with low-level PAHs)	PAHs 8270/SIM (low-level)	PCBs 8082	Organochlorine Pesticides 8081	Organophosphorus Pesticides 8270/SIM	Chlorinated Acid Herbicides 8151	Total RCRA Metals	Total MTCA Metals	TCLP Metals	HEM (oil and grease) 1664	% Moisture
																	<u>X</u>
																	<u>X</u>
																	<u>X</u>



Signature	Company	Date	Time	Comments/Special Instructions
<u>[Signature]</u>	<u>SWI</u>	<u>7/1/22</u>	<u>0800</u>	<u>24-hr hold time</u>
<u>J. Isaacson</u>	<u>ALPHA</u>	<u>7/1/22</u>	<u>0905</u>	
<u>J. Isaacson</u>	<u>ALPHA</u>	<u>7/1/22</u>	<u>0920</u>	
<u>J.C.</u>	<u>FAT</u>	<u>7/1/22</u>	<u>0923</u>	

Reviewed/Date \_\_\_\_\_

Data Package: Standard  Level III  Level IV

Chromatograms with final report  Electronic Data Deliverables (EDDs)

# Chain of Custody

Company: Shannon & Wilson  
Project Number: 105474-050  
Project Name: FL358 Monitoring Wells  
Project Manager: Joseph Sandey  
Sampled by: MPH & JXS

**Turnaround Request (in working days)**

(Check One)

Same Day       1 Day  
 2 Days         3 Days  
 Standard (7 Days)  
 \_\_\_\_\_ (other)

**Laboratory Number: 07-005**

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers
1	TB-220630	6/30/22	0800	Water	1
2	<del>EB-22</del> Rinsate-220630	↓	1230	↓	3
3	FL358-MW6-220630	↓	1100	↓	12
4	FL358-MW5A-220630	↓	1210	↓	9
5	FL358-MW5B-220630	↓	1335	↓	9

NWTPH-HCID	NWTPH-Gx/BTEX (8021) 8260	NWTPH-Gx	NWTPH-Dx (Acid / SG Clean-up)	Volatiles 8260	Halogenated Volatiles 8260	EDB EPA 8011 (Waters Only)	Semivolatiles 8270/SIM (with low-level PAHs)	PAHs 8270/SIM (low-level)	PCBs 8082	Organochlorine Pesticides 8081	Organophosphorus Pesticides 8270/SIM	Chlorinated Acid Herbicides 8151	Total PCRA Metals	Total MTCA Metals	TCLEP Metals	HEM (oil and grease) 1664	Ammonia, Nitrate, Nitrite	TOL by SM5310B	BOD by SM5210B	TOTAL IRON by EPA 6010D	% Methane Dissolved gases by RSK175
					X																
					X																
					X										X		X	X	X	X	X
					X										X		X	X	X	X	X
					X										X		X	X	X	X	X

Signature	Company	Date	Time	Comments/Special Instructions
<u>in [Signature]</u>	<u>SWI</u>	<u>7/1/22</u>	<u>0800</u>	<u>MS/MSD on FL358-MW6-220630 (3 extra VOA's)</u>
<u>[Signature]</u>	<u>ALPHA</u>	<u>7/1/22</u>	<u>0905</u>	<u>HVOLS = PLE, TLE, cis- and trans-1,2-DCE, 1,1-DCE, and VC. Reporting limit &lt;0.2mg/L</u>
<u>[Signature]</u>	<u>ALPHA</u>	<u>7/1/22</u>	<u>1117</u>	
<u>[Signature]</u>	<u>OSE</u>	<u>7/1/22</u>	<u>1117</u>	<u>Dissolved gases = Methane, Ethane, Ethene, Acetylene *Subbed directly to</u>
				<u>Data Package: Standard <input type="checkbox"/> Level III <input type="checkbox"/> Level IV <input type="checkbox"/> Fremont</u>
Reviewed/Date	Reviewed/Date			<u>Chromatograms with final report <input type="checkbox"/> Electronic Data Deliverables (EDDs) <input type="checkbox"/></u>



14648 NE 95<sup>th</sup> Street, Redmond, WA 98052 • (425) 883-3881

August 5, 2022

Joseph Sawdey  
Shannon & Wilson, Inc.  
400 N 34th Street, Suite 100  
Seattle, WA 98103

Re: Analytical Data for Project 105474-050  
Laboratory Reference No. 2206-318

Dear Joseph:

Enclosed are the analytical results and associated quality control data for samples submitted on June 29, 2022.

The standard policy of OnSite Environmental, Inc. is to store your samples for 30 days from the date of receipt. If you require longer storage, please contact the laboratory.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning the data, or need additional information, please feel free to call me.

Sincerely,

A handwritten signature in black ink, appearing to read "DB", with a long horizontal flourish extending to the right.

David Baumeister  
Project Manager

Enclosures



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OnSite Environmental, Inc. 14648 NE 95<sup>th</sup> Street, Redmond, WA 98052 (425) 883-3881

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: August 5, 2022  
Samples Submitted: June 29, 2022  
Laboratory Reference: 2206-318  
Project: 105474-050

### Case Narrative

Samples were collected on June 28, 2022 and received by the laboratory on June 29, 2022. They were maintained at the laboratory at a temperature of 2°C to 6°C.

Please note that any and all soil sample results are reported on a dry-weight basis, unless otherwise noted below.

General QA/QC issues associated with the analytical data enclosed in this laboratory report will be indicated with a reference to a comment or explanation on the Data Qualifier page. More complex and involved QA/QC issues will be discussed in detail below.

#### Volatiles EPA 8260D Analysis

Method 5035A states that for low-level VOC analysis the purge-and-trap system employed must be capable of agitating the sealed sample during the purging process. The purge-and-trap system that OnSite Environmental utilizes for the analysis of low-level VOCs has a stir motor that spins a magnetic stir bar within the sample thereby agitating the sample and providing more efficient purging. Method 5035A VOA vials containing stir bars were not provided for samples FL358-MW10-Soil IDW and FL358-MW11-Soil IDW. Therefore, a VOA vial without a stir bar was analyzed for each sample and reported for the low-level VOC analysis.

Any other QA/QC issues associated with this extraction and analysis will be indicated with a footnote reference and discussed in detail on the Data Qualifier page.



Date of Report: August 5, 2022  
 Samples Submitted: June 29, 2022  
 Laboratory Reference: 2206-318  
 Project: 105474-050

**VOLATILE ORGANICS EPA 8260D**  
 page 1 of 2

Matrix: Soil  
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>FL358-MW10-Soil IDW</b>					
Laboratory ID:	06-318-01					
Dichlorodifluoromethane	ND	0.0011	EPA 8260D	7-5-22	7-5-22	
Chloromethane	ND	0.0039	EPA 8260D	7-5-22	7-5-22	
Vinyl Chloride	ND	0.00079	EPA 8260D	7-5-22	7-5-22	
Bromomethane	ND	0.0079	EPA 8260D	7-5-22	7-5-22	
Chloroethane	ND	0.0039	EPA 8260D	7-5-22	7-5-22	
Trichlorofluoromethane	ND	0.00079	EPA 8260D	7-5-22	7-5-22	
1,1-Dichloroethene	ND	0.00079	EPA 8260D	7-5-22	7-5-22	
Acetone	0.0083	0.0079	EPA 8260D	7-5-22	7-5-22	Y
Iodomethane	ND	0.0072	EPA 8260D	7-5-22	7-5-22	
Carbon Disulfide	ND	0.00079	EPA 8260D	7-5-22	7-5-22	
Methylene Chloride	ND	0.0039	EPA 8260D	7-5-22	7-5-22	
(trans) 1,2-Dichloroethene	ND	0.00079	EPA 8260D	7-5-22	7-5-22	
Methyl t-Butyl Ether	ND	0.00079	EPA 8260D	7-5-22	7-5-22	
1,1-Dichloroethane	ND	0.00079	EPA 8260D	7-5-22	7-5-22	
Vinyl Acetate	ND	0.0039	EPA 8260D	7-5-22	7-5-22	
2,2-Dichloropropane	ND	0.00079	EPA 8260D	7-5-22	7-5-22	
(cis) 1,2-Dichloroethene	ND	0.00079	EPA 8260D	7-5-22	7-5-22	
2-Butanone	ND	0.0039	EPA 8260D	7-5-22	7-5-22	
Bromochloromethane	ND	0.00079	EPA 8260D	7-5-22	7-5-22	
Chloroform	ND	0.00079	EPA 8260D	7-5-22	7-5-22	
1,1,1-Trichloroethane	ND	0.00079	EPA 8260D	7-5-22	7-5-22	
Carbon Tetrachloride	ND	0.00079	EPA 8260D	7-5-22	7-5-22	
1,1-Dichloropropene	ND	0.00079	EPA 8260D	7-5-22	7-5-22	
Benzene	ND	0.00079	EPA 8260D	7-5-22	7-5-22	
1,2-Dichloroethane	ND	0.00079	EPA 8260D	7-5-22	7-5-22	
Trichloroethene	ND	0.00079	EPA 8260D	7-5-22	7-5-22	
1,2-Dichloropropane	ND	0.00079	EPA 8260D	7-5-22	7-5-22	
Dibromomethane	ND	0.00079	EPA 8260D	7-5-22	7-5-22	
Bromodichloromethane	ND	0.00079	EPA 8260D	7-5-22	7-5-22	
2-Chloroethyl Vinyl Ether	ND	0.0039	EPA 8260D	7-5-22	7-5-22	
(cis) 1,3-Dichloropropene	ND	0.00079	EPA 8260D	7-5-22	7-5-22	
Methyl Isobutyl Ketone	ND	0.0039	EPA 8260D	7-5-22	7-5-22	
Toluene	ND	0.0039	EPA 8260D	7-5-22	7-5-22	
(trans) 1,3-Dichloropropene	ND	0.00079	EPA 8260D	7-5-22	7-5-22	



Date of Report: August 5, 2022  
 Samples Submitted: June 29, 2022  
 Laboratory Reference: 2206-318  
 Project: 105474-050

**VOLATILE ORGANICS EPA 8260D**  
 page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>FL358-MW10-Soil IDW</b>					
Laboratory ID:	06-318-01					
1,1,2-Trichloroethane	ND	0.00079	EPA 8260D	7-5-22	7-5-22	
Tetrachloroethene	ND	0.00079	EPA 8260D	7-5-22	7-5-22	
1,3-Dichloropropane	ND	0.00079	EPA 8260D	7-5-22	7-5-22	
2-Hexanone	ND	0.0039	EPA 8260D	7-5-22	7-5-22	
Dibromochloromethane	ND	0.00079	EPA 8260D	7-5-22	7-5-22	
1,2-Dibromoethane	ND	0.00079	EPA 8260D	7-5-22	7-5-22	
Chlorobenzene	ND	0.00079	EPA 8260D	7-5-22	7-5-22	
1,1,1,2-Tetrachloroethane	ND	0.00079	EPA 8260D	7-5-22	7-5-22	
Ethylbenzene	ND	0.00079	EPA 8260D	7-5-22	7-5-22	
m,p-Xylene	ND	0.0016	EPA 8260D	7-5-22	7-5-22	
o-Xylene	ND	0.00079	EPA 8260D	7-5-22	7-5-22	
Styrene	ND	0.00079	EPA 8260D	7-5-22	7-5-22	
Bromoform	ND	0.0039	EPA 8260D	7-5-22	7-5-22	
Isopropylbenzene	ND	0.00079	EPA 8260D	7-5-22	7-5-22	
Bromobenzene	ND	0.00079	EPA 8260D	7-5-22	7-5-22	
1,1,2,2-Tetrachloroethane	ND	0.00079	EPA 8260D	7-5-22	7-5-22	
1,2,3-Trichloropropane	ND	0.00079	EPA 8260D	7-5-22	7-5-22	
n-Propylbenzene	ND	0.00079	EPA 8260D	7-5-22	7-5-22	
2-Chlorotoluene	ND	0.00079	EPA 8260D	7-5-22	7-5-22	
4-Chlorotoluene	ND	0.00079	EPA 8260D	7-5-22	7-5-22	
1,3,5-Trimethylbenzene	ND	0.00079	EPA 8260D	7-5-22	7-5-22	
tert-Butylbenzene	ND	0.00079	EPA 8260D	7-5-22	7-5-22	
1,2,4-Trimethylbenzene	ND	0.00079	EPA 8260D	7-5-22	7-5-22	
sec-Butylbenzene	ND	0.00079	EPA 8260D	7-5-22	7-5-22	
1,3-Dichlorobenzene	ND	0.00079	EPA 8260D	7-5-22	7-5-22	
p-Isopropyltoluene	ND	0.00079	EPA 8260D	7-5-22	7-5-22	
1,4-Dichlorobenzene	ND	0.00079	EPA 8260D	7-5-22	7-5-22	
1,2-Dichlorobenzene	ND	0.00079	EPA 8260D	7-5-22	7-5-22	
n-Butylbenzene	ND	0.00079	EPA 8260D	7-5-22	7-5-22	
1,2-Dibromo-3-chloropropane	ND	0.0039	EPA 8260D	7-5-22	7-5-22	
1,2,4-Trichlorobenzene	ND	0.00079	EPA 8260D	7-5-22	7-5-22	
Hexachlorobutadiene	ND	0.0039	EPA 8260D	7-5-22	7-5-22	
Naphthalene	ND	0.0039	EPA 8260D	7-5-22	7-5-22	
1,2,3-Trichlorobenzene	ND	0.00079	EPA 8260D	7-5-22	7-5-22	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>102</i>	<i>75-130</i>				
<i>Toluene-d8</i>	<i>101</i>	<i>78-128</i>				
<i>4-Bromofluorobenzene</i>	<i>99</i>	<i>71-130</i>				



Date of Report: August 5, 2022  
 Samples Submitted: June 29, 2022  
 Laboratory Reference: 2206-318  
 Project: 105474-050

**VOLATILE ORGANICS EPA 8260D**  
 page 1 of 2

Matrix: Soil  
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>FL358-MW11-Soil IDW</b>					
Laboratory ID:	06-318-02					
Dichlorodifluoromethane	ND	0.0012	EPA 8260D	7-5-22	7-5-22	
Chloromethane	ND	0.0042	EPA 8260D	7-5-22	7-5-22	
Vinyl Chloride	ND	0.00084	EPA 8260D	7-5-22	7-5-22	
Bromomethane	ND	0.0084	EPA 8260D	7-5-22	7-5-22	
Chloroethane	ND	0.0042	EPA 8260D	7-5-22	7-5-22	
Trichlorofluoromethane	ND	0.00084	EPA 8260D	7-5-22	7-5-22	
1,1-Dichloroethene	ND	0.00084	EPA 8260D	7-5-22	7-5-22	
Acetone	ND	0.0084	EPA 8260D	7-5-22	7-5-22	
Iodomethane	ND	0.0078	EPA 8260D	7-5-22	7-5-22	
Carbon Disulfide	ND	0.00084	EPA 8260D	7-5-22	7-5-22	
Methylene Chloride	ND	0.0042	EPA 8260D	7-5-22	7-5-22	
(trans) 1,2-Dichloroethene	ND	0.00084	EPA 8260D	7-5-22	7-5-22	
Methyl t-Butyl Ether	ND	0.00084	EPA 8260D	7-5-22	7-5-22	
1,1-Dichloroethane	ND	0.00084	EPA 8260D	7-5-22	7-5-22	
Vinyl Acetate	ND	0.0042	EPA 8260D	7-5-22	7-5-22	
2,2-Dichloropropane	ND	0.00084	EPA 8260D	7-5-22	7-5-22	
(cis) 1,2-Dichloroethene	ND	0.00084	EPA 8260D	7-5-22	7-5-22	
2-Butanone	ND	0.0042	EPA 8260D	7-5-22	7-5-22	
Bromochloromethane	ND	0.00084	EPA 8260D	7-5-22	7-5-22	
Chloroform	ND	0.00084	EPA 8260D	7-5-22	7-5-22	
1,1,1-Trichloroethane	ND	0.00084	EPA 8260D	7-5-22	7-5-22	
Carbon Tetrachloride	ND	0.00084	EPA 8260D	7-5-22	7-5-22	
1,1-Dichloropropene	ND	0.00084	EPA 8260D	7-5-22	7-5-22	
Benzene	ND	0.00084	EPA 8260D	7-5-22	7-5-22	
1,2-Dichloroethane	ND	0.00084	EPA 8260D	7-5-22	7-5-22	
Trichloroethene	ND	0.00084	EPA 8260D	7-5-22	7-5-22	
1,2-Dichloropropane	ND	0.00084	EPA 8260D	7-5-22	7-5-22	
Dibromomethane	ND	0.00084	EPA 8260D	7-5-22	7-5-22	
Bromodichloromethane	ND	0.00084	EPA 8260D	7-5-22	7-5-22	
2-Chloroethyl Vinyl Ether	ND	0.0042	EPA 8260D	7-5-22	7-5-22	
(cis) 1,3-Dichloropropene	ND	0.00084	EPA 8260D	7-5-22	7-5-22	
Methyl Isobutyl Ketone	ND	0.0042	EPA 8260D	7-5-22	7-5-22	
Toluene	ND	0.0042	EPA 8260D	7-5-22	7-5-22	
(trans) 1,3-Dichloropropene	ND	0.00084	EPA 8260D	7-5-22	7-5-22	



Date of Report: August 5, 2022  
 Samples Submitted: June 29, 2022  
 Laboratory Reference: 2206-318  
 Project: 105474-050

**VOLATILE ORGANICS EPA 8260D**  
 page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>FL358-MW11-Soil IDW</b>					
Laboratory ID:	06-318-02					
1,1,2-Trichloroethane	ND	0.00084	EPA 8260D	7-5-22	7-5-22	
Tetrachloroethene	ND	0.00084	EPA 8260D	7-5-22	7-5-22	
1,3-Dichloropropane	ND	0.00084	EPA 8260D	7-5-22	7-5-22	
2-Hexanone	ND	0.0042	EPA 8260D	7-5-22	7-5-22	
Dibromochloromethane	ND	0.00084	EPA 8260D	7-5-22	7-5-22	
1,2-Dibromoethane	ND	0.00084	EPA 8260D	7-5-22	7-5-22	
Chlorobenzene	ND	0.00084	EPA 8260D	7-5-22	7-5-22	
1,1,1,2-Tetrachloroethane	ND	0.00084	EPA 8260D	7-5-22	7-5-22	
Ethylbenzene	ND	0.00084	EPA 8260D	7-5-22	7-5-22	
m,p-Xylene	ND	0.0017	EPA 8260D	7-5-22	7-5-22	
o-Xylene	ND	0.00084	EPA 8260D	7-5-22	7-5-22	
Styrene	ND	0.00084	EPA 8260D	7-5-22	7-5-22	
Bromoform	ND	0.0042	EPA 8260D	7-5-22	7-5-22	
Isopropylbenzene	ND	0.00084	EPA 8260D	7-5-22	7-5-22	
Bromobenzene	ND	0.00084	EPA 8260D	7-5-22	7-5-22	
1,1,2,2-Tetrachloroethane	ND	0.00084	EPA 8260D	7-5-22	7-5-22	
1,2,3-Trichloropropane	ND	0.00084	EPA 8260D	7-5-22	7-5-22	
n-Propylbenzene	ND	0.00084	EPA 8260D	7-5-22	7-5-22	
2-Chlorotoluene	ND	0.00084	EPA 8260D	7-5-22	7-5-22	
4-Chlorotoluene	ND	0.00084	EPA 8260D	7-5-22	7-5-22	
1,3,5-Trimethylbenzene	ND	0.00084	EPA 8260D	7-5-22	7-5-22	
tert-Butylbenzene	ND	0.00084	EPA 8260D	7-5-22	7-5-22	
1,2,4-Trimethylbenzene	ND	0.00084	EPA 8260D	7-5-22	7-5-22	
sec-Butylbenzene	ND	0.00084	EPA 8260D	7-5-22	7-5-22	
1,3-Dichlorobenzene	ND	0.00084	EPA 8260D	7-5-22	7-5-22	
p-Isopropyltoluene	ND	0.00084	EPA 8260D	7-5-22	7-5-22	
1,4-Dichlorobenzene	ND	0.00084	EPA 8260D	7-5-22	7-5-22	
1,2-Dichlorobenzene	ND	0.00084	EPA 8260D	7-5-22	7-5-22	
n-Butylbenzene	ND	0.00084	EPA 8260D	7-5-22	7-5-22	
1,2-Dibromo-3-chloropropane	ND	0.0042	EPA 8260D	7-5-22	7-5-22	
1,2,4-Trichlorobenzene	ND	0.00084	EPA 8260D	7-5-22	7-5-22	
Hexachlorobutadiene	ND	0.0042	EPA 8260D	7-5-22	7-5-22	
Naphthalene	ND	0.0042	EPA 8260D	7-5-22	7-5-22	
1,2,3-Trichlorobenzene	ND	0.00084	EPA 8260D	7-5-22	7-5-22	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>105</i>	<i>75-130</i>				
<i>Toluene-d8</i>	<i>101</i>	<i>78-128</i>				
<i>4-Bromofluorobenzene</i>	<i>100</i>	<i>71-130</i>				



Date of Report: August 5, 2022  
 Samples Submitted: June 29, 2022  
 Laboratory Reference: 2206-318  
 Project: 105474-050

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Matrix: Soil  
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>FL358-MW13-Soil IDW</b>					
Laboratory ID:	06-318-03					
Dichlorodifluoromethane	ND	0.0011	EPA 8260D	7-5-22	7-5-22	
Chloromethane	ND	0.0040	EPA 8260D	7-5-22	7-5-22	
Vinyl Chloride	ND	0.00080	EPA 8260D	7-5-22	7-5-22	
Bromomethane	ND	0.0080	EPA 8260D	7-5-22	7-5-22	
Chloroethane	ND	0.0040	EPA 8260D	7-5-22	7-5-22	
Trichlorofluoromethane	ND	0.00080	EPA 8260D	7-5-22	7-5-22	
1,1-Dichloroethene	ND	0.00080	EPA 8260D	7-5-22	7-5-22	
Acetone	ND	0.0080	EPA 8260D	7-5-22	7-5-22	
Iodomethane	ND	0.0073	EPA 8260D	7-5-22	7-5-22	
Carbon Disulfide	ND	0.00080	EPA 8260D	7-5-22	7-5-22	
Methylene Chloride	ND	0.0040	EPA 8260D	7-5-22	7-5-22	
(trans) 1,2-Dichloroethene	ND	0.00080	EPA 8260D	7-5-22	7-5-22	
Methyl t-Butyl Ether	ND	0.00080	EPA 8260D	7-5-22	7-5-22	
1,1-Dichloroethane	ND	0.00080	EPA 8260D	7-5-22	7-5-22	
Vinyl Acetate	ND	0.0040	EPA 8260D	7-5-22	7-5-22	
2,2-Dichloropropane	ND	0.00080	EPA 8260D	7-5-22	7-5-22	
(cis) 1,2-Dichloroethene	ND	0.00080	EPA 8260D	7-5-22	7-5-22	
2-Butanone	ND	0.0040	EPA 8260D	7-5-22	7-5-22	
Bromochloromethane	ND	0.00080	EPA 8260D	7-5-22	7-5-22	
Chloroform	ND	0.00080	EPA 8260D	7-5-22	7-5-22	
1,1,1-Trichloroethane	ND	0.00080	EPA 8260D	7-5-22	7-5-22	
Carbon Tetrachloride	ND	0.00080	EPA 8260D	7-5-22	7-5-22	
1,1-Dichloropropene	ND	0.00080	EPA 8260D	7-5-22	7-5-22	
Benzene	ND	0.00080	EPA 8260D	7-5-22	7-5-22	
1,2-Dichloroethane	ND	0.00080	EPA 8260D	7-5-22	7-5-22	
Trichloroethene	ND	0.00080	EPA 8260D	7-5-22	7-5-22	
1,2-Dichloropropane	ND	0.00080	EPA 8260D	7-5-22	7-5-22	
Dibromomethane	ND	0.00080	EPA 8260D	7-5-22	7-5-22	
Bromodichloromethane	ND	0.00080	EPA 8260D	7-5-22	7-5-22	
2-Chloroethyl Vinyl Ether	ND	0.0040	EPA 8260D	7-5-22	7-5-22	
(cis) 1,3-Dichloropropene	ND	0.00080	EPA 8260D	7-5-22	7-5-22	
Methyl Isobutyl Ketone	ND	0.0040	EPA 8260D	7-5-22	7-5-22	
Toluene	ND	0.0040	EPA 8260D	7-5-22	7-5-22	
(trans) 1,3-Dichloropropene	ND	0.00080	EPA 8260D	7-5-22	7-5-22	



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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>FL358-MW13-Soil IDW</b>					
Laboratory ID:	06-318-03					
1,1,2-Trichloroethane	ND	0.00080	EPA 8260D	7-5-22	7-5-22	
Tetrachloroethene	ND	0.00080	EPA 8260D	7-5-22	7-5-22	
1,3-Dichloropropane	ND	0.00080	EPA 8260D	7-5-22	7-5-22	
2-Hexanone	ND	0.0040	EPA 8260D	7-5-22	7-5-22	
Dibromochloromethane	ND	0.00080	EPA 8260D	7-5-22	7-5-22	
1,2-Dibromoethane	ND	0.00080	EPA 8260D	7-5-22	7-5-22	
Chlorobenzene	ND	0.00080	EPA 8260D	7-5-22	7-5-22	
1,1,1,2-Tetrachloroethane	ND	0.00080	EPA 8260D	7-5-22	7-5-22	
Ethylbenzene	ND	0.00080	EPA 8260D	7-5-22	7-5-22	
m,p-Xylene	ND	0.0016	EPA 8260D	7-5-22	7-5-22	
o-Xylene	ND	0.00080	EPA 8260D	7-5-22	7-5-22	
Styrene	ND	0.00080	EPA 8260D	7-5-22	7-5-22	
Bromoform	ND	0.0040	EPA 8260D	7-5-22	7-5-22	
Isopropylbenzene	ND	0.00080	EPA 8260D	7-5-22	7-5-22	
Bromobenzene	ND	0.00080	EPA 8260D	7-5-22	7-5-22	
1,1,2,2-Tetrachloroethane	ND	0.00080	EPA 8260D	7-5-22	7-5-22	
1,2,3-Trichloropropane	ND	0.00080	EPA 8260D	7-5-22	7-5-22	
n-Propylbenzene	ND	0.00080	EPA 8260D	7-5-22	7-5-22	
2-Chlorotoluene	ND	0.00080	EPA 8260D	7-5-22	7-5-22	
4-Chlorotoluene	ND	0.00080	EPA 8260D	7-5-22	7-5-22	
1,3,5-Trimethylbenzene	ND	0.00080	EPA 8260D	7-5-22	7-5-22	
tert-Butylbenzene	ND	0.00080	EPA 8260D	7-5-22	7-5-22	
1,2,4-Trimethylbenzene	ND	0.00080	EPA 8260D	7-5-22	7-5-22	
sec-Butylbenzene	ND	0.00080	EPA 8260D	7-5-22	7-5-22	
1,3-Dichlorobenzene	ND	0.00080	EPA 8260D	7-5-22	7-5-22	
p-Isopropyltoluene	ND	0.00080	EPA 8260D	7-5-22	7-5-22	
1,4-Dichlorobenzene	ND	0.00080	EPA 8260D	7-5-22	7-5-22	
1,2-Dichlorobenzene	ND	0.00080	EPA 8260D	7-5-22	7-5-22	
n-Butylbenzene	ND	0.00080	EPA 8260D	7-5-22	7-5-22	
1,2-Dibromo-3-chloropropane	ND	0.0040	EPA 8260D	7-5-22	7-5-22	
1,2,4-Trichlorobenzene	ND	0.00080	EPA 8260D	7-5-22	7-5-22	
Hexachlorobutadiene	ND	0.0040	EPA 8260D	7-5-22	7-5-22	
Naphthalene	ND	0.0040	EPA 8260D	7-5-22	7-5-22	
1,2,3-Trichlorobenzene	ND	0.00080	EPA 8260D	7-5-22	7-5-22	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>106</i>	<i>75-130</i>				
<i>Toluene-d8</i>	<i>102</i>	<i>78-128</i>				
<i>4-Bromofluorobenzene</i>	<i>97</i>	<i>71-130</i>				



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Matrix: Soil  
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>FL358-MW14-Soil IDW</b>					
Laboratory ID:	06-318-04					
Dichlorodifluoromethane	ND	0.0013	EPA 8260D	7-5-22	7-5-22	
Chloromethane	ND	0.0045	EPA 8260D	7-5-22	7-5-22	
Vinyl Chloride	ND	0.00090	EPA 8260D	7-5-22	7-5-22	
Bromomethane	ND	0.0090	EPA 8260D	7-5-22	7-5-22	
Chloroethane	ND	0.0045	EPA 8260D	7-5-22	7-5-22	
Trichlorofluoromethane	ND	0.00090	EPA 8260D	7-5-22	7-5-22	
1,1-Dichloroethene	ND	0.00090	EPA 8260D	7-5-22	7-5-22	
Acetone	ND	0.0090	EPA 8260D	7-5-22	7-5-22	
Iodomethane	ND	0.0083	EPA 8260D	7-5-22	7-5-22	
Carbon Disulfide	ND	0.00090	EPA 8260D	7-5-22	7-5-22	
Methylene Chloride	ND	0.0045	EPA 8260D	7-5-22	7-5-22	
(trans) 1,2-Dichloroethene	ND	0.00090	EPA 8260D	7-5-22	7-5-22	
Methyl t-Butyl Ether	ND	0.00090	EPA 8260D	7-5-22	7-5-22	
1,1-Dichloroethane	ND	0.00090	EPA 8260D	7-5-22	7-5-22	
Vinyl Acetate	ND	0.0045	EPA 8260D	7-5-22	7-5-22	
2,2-Dichloropropane	ND	0.00090	EPA 8260D	7-5-22	7-5-22	
(cis) 1,2-Dichloroethene	ND	0.00090	EPA 8260D	7-5-22	7-5-22	
2-Butanone	ND	0.0045	EPA 8260D	7-5-22	7-5-22	
Bromochloromethane	ND	0.00090	EPA 8260D	7-5-22	7-5-22	
Chloroform	ND	0.00090	EPA 8260D	7-5-22	7-5-22	
1,1,1-Trichloroethane	ND	0.00090	EPA 8260D	7-5-22	7-5-22	
Carbon Tetrachloride	ND	0.00090	EPA 8260D	7-5-22	7-5-22	
1,1-Dichloropropene	ND	0.00090	EPA 8260D	7-5-22	7-5-22	
Benzene	ND	0.00090	EPA 8260D	7-5-22	7-5-22	
1,2-Dichloroethane	ND	0.00090	EPA 8260D	7-5-22	7-5-22	
Trichloroethene	ND	0.00090	EPA 8260D	7-5-22	7-5-22	
1,2-Dichloropropane	ND	0.00090	EPA 8260D	7-5-22	7-5-22	
Dibromomethane	ND	0.00090	EPA 8260D	7-5-22	7-5-22	
Bromodichloromethane	ND	0.00090	EPA 8260D	7-5-22	7-5-22	
2-Chloroethyl Vinyl Ether	ND	0.0045	EPA 8260D	7-5-22	7-5-22	
(cis) 1,3-Dichloropropene	ND	0.00090	EPA 8260D	7-5-22	7-5-22	
Methyl Isobutyl Ketone	ND	0.0045	EPA 8260D	7-5-22	7-5-22	
Toluene	ND	0.0045	EPA 8260D	7-5-22	7-5-22	
(trans) 1,3-Dichloropropene	ND	0.00090	EPA 8260D	7-5-22	7-5-22	



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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>FL358-MW14-Soil IDW</b>					
Laboratory ID:	06-318-04					
1,1,2-Trichloroethane	ND	0.00090	EPA 8260D	7-5-22	7-5-22	
Tetrachloroethene	ND	0.00090	EPA 8260D	7-5-22	7-5-22	
1,3-Dichloropropane	ND	0.00090	EPA 8260D	7-5-22	7-5-22	
2-Hexanone	ND	0.0045	EPA 8260D	7-5-22	7-5-22	
Dibromochloromethane	ND	0.00090	EPA 8260D	7-5-22	7-5-22	
1,2-Dibromoethane	ND	0.00090	EPA 8260D	7-5-22	7-5-22	
Chlorobenzene	ND	0.00090	EPA 8260D	7-5-22	7-5-22	
1,1,1,2-Tetrachloroethane	ND	0.00090	EPA 8260D	7-5-22	7-5-22	
Ethylbenzene	ND	0.00090	EPA 8260D	7-5-22	7-5-22	
m,p-Xylene	ND	0.0018	EPA 8260D	7-5-22	7-5-22	
o-Xylene	ND	0.00090	EPA 8260D	7-5-22	7-5-22	
Styrene	ND	0.00090	EPA 8260D	7-5-22	7-5-22	
Bromoform	ND	0.0045	EPA 8260D	7-5-22	7-5-22	
Isopropylbenzene	ND	0.00090	EPA 8260D	7-5-22	7-5-22	
Bromobenzene	ND	0.00090	EPA 8260D	7-5-22	7-5-22	
1,1,2,2-Tetrachloroethane	ND	0.00090	EPA 8260D	7-5-22	7-5-22	
1,2,3-Trichloropropane	ND	0.00090	EPA 8260D	7-5-22	7-5-22	
n-Propylbenzene	ND	0.00090	EPA 8260D	7-5-22	7-5-22	
2-Chlorotoluene	ND	0.00090	EPA 8260D	7-5-22	7-5-22	
4-Chlorotoluene	ND	0.00090	EPA 8260D	7-5-22	7-5-22	
1,3,5-Trimethylbenzene	ND	0.00090	EPA 8260D	7-5-22	7-5-22	
tert-Butylbenzene	ND	0.00090	EPA 8260D	7-5-22	7-5-22	
1,2,4-Trimethylbenzene	ND	0.00090	EPA 8260D	7-5-22	7-5-22	
sec-Butylbenzene	ND	0.00090	EPA 8260D	7-5-22	7-5-22	
1,3-Dichlorobenzene	ND	0.00090	EPA 8260D	7-5-22	7-5-22	
p-Isopropyltoluene	ND	0.00090	EPA 8260D	7-5-22	7-5-22	
1,4-Dichlorobenzene	ND	0.00090	EPA 8260D	7-5-22	7-5-22	
1,2-Dichlorobenzene	ND	0.00090	EPA 8260D	7-5-22	7-5-22	
n-Butylbenzene	ND	0.00090	EPA 8260D	7-5-22	7-5-22	
1,2-Dibromo-3-chloropropane	ND	0.0045	EPA 8260D	7-5-22	7-5-22	
1,2,4-Trichlorobenzene	ND	0.00090	EPA 8260D	7-5-22	7-5-22	
Hexachlorobutadiene	ND	0.0045	EPA 8260D	7-5-22	7-5-22	
Naphthalene	ND	0.0045	EPA 8260D	7-5-22	7-5-22	
1,2,3-Trichlorobenzene	ND	0.00090	EPA 8260D	7-5-22	7-5-22	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>106</i>	<i>75-130</i>				
<i>Toluene-d8</i>	<i>101</i>	<i>78-128</i>				
<i>4-Bromofluorobenzene</i>	<i>99</i>	<i>71-130</i>				



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Matrix: Soil  
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>FL358-MW8-Soil IDW</b>					
Laboratory ID:	06-318-05					
Dichlorodifluoromethane	ND	0.0013	EPA 8260D	7-5-22	7-5-22	
Chloromethane	ND	0.0045	EPA 8260D	7-5-22	7-5-22	
Vinyl Chloride	ND	0.00089	EPA 8260D	7-5-22	7-5-22	
Bromomethane	ND	0.0089	EPA 8260D	7-5-22	7-5-22	
Chloroethane	ND	0.0045	EPA 8260D	7-5-22	7-5-22	
Trichlorofluoromethane	ND	0.00089	EPA 8260D	7-5-22	7-5-22	
1,1-Dichloroethene	ND	0.00089	EPA 8260D	7-5-22	7-5-22	
Acetone	ND	0.0089	EPA 8260D	7-5-22	7-5-22	
Iodomethane	ND	0.0082	EPA 8260D	7-5-22	7-5-22	
Carbon Disulfide	ND	0.00089	EPA 8260D	7-5-22	7-5-22	
Methylene Chloride	ND	0.0045	EPA 8260D	7-5-22	7-5-22	
(trans) 1,2-Dichloroethene	ND	0.00089	EPA 8260D	7-5-22	7-5-22	
Methyl t-Butyl Ether	ND	0.00089	EPA 8260D	7-5-22	7-5-22	
1,1-Dichloroethane	ND	0.00089	EPA 8260D	7-5-22	7-5-22	
Vinyl Acetate	ND	0.0045	EPA 8260D	7-5-22	7-5-22	
2,2-Dichloropropane	ND	0.00089	EPA 8260D	7-5-22	7-5-22	
(cis) 1,2-Dichloroethene	ND	0.00089	EPA 8260D	7-5-22	7-5-22	
2-Butanone	ND	0.0045	EPA 8260D	7-5-22	7-5-22	
Bromochloromethane	ND	0.00089	EPA 8260D	7-5-22	7-5-22	
Chloroform	ND	0.00089	EPA 8260D	7-5-22	7-5-22	
1,1,1-Trichloroethane	ND	0.00089	EPA 8260D	7-5-22	7-5-22	
Carbon Tetrachloride	ND	0.00089	EPA 8260D	7-5-22	7-5-22	
1,1-Dichloropropene	ND	0.00089	EPA 8260D	7-5-22	7-5-22	
Benzene	ND	0.00089	EPA 8260D	7-5-22	7-5-22	
1,2-Dichloroethane	ND	0.00089	EPA 8260D	7-5-22	7-5-22	
Trichloroethene	ND	0.00089	EPA 8260D	7-5-22	7-5-22	
1,2-Dichloropropane	ND	0.00089	EPA 8260D	7-5-22	7-5-22	
Dibromomethane	ND	0.00089	EPA 8260D	7-5-22	7-5-22	
Bromodichloromethane	ND	0.00089	EPA 8260D	7-5-22	7-5-22	
2-Chloroethyl Vinyl Ether	ND	0.0045	EPA 8260D	7-5-22	7-5-22	
(cis) 1,3-Dichloropropene	ND	0.00089	EPA 8260D	7-5-22	7-5-22	
Methyl Isobutyl Ketone	ND	0.0045	EPA 8260D	7-5-22	7-5-22	
Toluene	ND	0.0045	EPA 8260D	7-5-22	7-5-22	
(trans) 1,3-Dichloropropene	ND	0.00089	EPA 8260D	7-5-22	7-5-22	



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 Laboratory Reference: 2206-318  
 Project: 105474-050

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>FL358-MW8-Soil IDW</b>					
Laboratory ID:	06-318-05					
1,1,2-Trichloroethane	ND	0.00089	EPA 8260D	7-5-22	7-5-22	
Tetrachloroethene	ND	0.00089	EPA 8260D	7-5-22	7-5-22	
1,3-Dichloropropane	ND	0.00089	EPA 8260D	7-5-22	7-5-22	
2-Hexanone	ND	0.0045	EPA 8260D	7-5-22	7-5-22	
Dibromochloromethane	ND	0.00089	EPA 8260D	7-5-22	7-5-22	
1,2-Dibromoethane	ND	0.00089	EPA 8260D	7-5-22	7-5-22	
Chlorobenzene	ND	0.00089	EPA 8260D	7-5-22	7-5-22	
1,1,1,2-Tetrachloroethane	ND	0.00089	EPA 8260D	7-5-22	7-5-22	
Ethylbenzene	ND	0.00089	EPA 8260D	7-5-22	7-5-22	
m,p-Xylene	ND	0.0018	EPA 8260D	7-5-22	7-5-22	
o-Xylene	ND	0.00089	EPA 8260D	7-5-22	7-5-22	
Styrene	ND	0.00089	EPA 8260D	7-5-22	7-5-22	
Bromoform	ND	0.0045	EPA 8260D	7-5-22	7-5-22	
Isopropylbenzene	ND	0.00089	EPA 8260D	7-5-22	7-5-22	
Bromobenzene	ND	0.00089	EPA 8260D	7-5-22	7-5-22	
1,1,2,2-Tetrachloroethane	ND	0.00089	EPA 8260D	7-5-22	7-5-22	
1,2,3-Trichloropropane	ND	0.00089	EPA 8260D	7-5-22	7-5-22	
n-Propylbenzene	ND	0.00089	EPA 8260D	7-5-22	7-5-22	
2-Chlorotoluene	ND	0.00089	EPA 8260D	7-5-22	7-5-22	
4-Chlorotoluene	ND	0.00089	EPA 8260D	7-5-22	7-5-22	
1,3,5-Trimethylbenzene	ND	0.00089	EPA 8260D	7-5-22	7-5-22	
tert-Butylbenzene	ND	0.00089	EPA 8260D	7-5-22	7-5-22	
1,2,4-Trimethylbenzene	ND	0.00089	EPA 8260D	7-5-22	7-5-22	
sec-Butylbenzene	ND	0.00089	EPA 8260D	7-5-22	7-5-22	
1,3-Dichlorobenzene	ND	0.00089	EPA 8260D	7-5-22	7-5-22	
p-Isopropyltoluene	ND	0.00089	EPA 8260D	7-5-22	7-5-22	
1,4-Dichlorobenzene	ND	0.00089	EPA 8260D	7-5-22	7-5-22	
1,2-Dichlorobenzene	ND	0.00089	EPA 8260D	7-5-22	7-5-22	
n-Butylbenzene	ND	0.00089	EPA 8260D	7-5-22	7-5-22	
1,2-Dibromo-3-chloropropane	ND	0.0045	EPA 8260D	7-5-22	7-5-22	
1,2,4-Trichlorobenzene	ND	0.00089	EPA 8260D	7-5-22	7-5-22	
Hexachlorobutadiene	ND	0.0045	EPA 8260D	7-5-22	7-5-22	
Naphthalene	ND	0.0045	EPA 8260D	7-5-22	7-5-22	
1,2,3-Trichlorobenzene	ND	0.00089	EPA 8260D	7-5-22	7-5-22	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>107</i>	<i>75-130</i>				
<i>Toluene-d8</i>	<i>101</i>	<i>78-128</i>				
<i>4-Bromofluorobenzene</i>	<i>100</i>	<i>71-130</i>				



Date of Report: August 5, 2022  
 Samples Submitted: June 29, 2022  
 Laboratory Reference: 2206-318  
 Project: 105474-050

**VOLATILE ORGANICS EPA 8260D**  
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Matrix: Soil  
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>FL358-MW9-Soil IDW</b>					
Laboratory ID:	06-318-06					
Dichlorodifluoromethane	ND	0.0018	EPA 8260D	7-5-22	7-5-22	
Chloromethane	ND	0.0065	EPA 8260D	7-5-22	7-5-22	
Vinyl Chloride	ND	0.0013	EPA 8260D	7-5-22	7-5-22	
Bromomethane	ND	0.013	EPA 8260D	7-5-22	7-5-22	
Chloroethane	ND	0.0065	EPA 8260D	7-5-22	7-5-22	
Trichlorofluoromethane	ND	0.0013	EPA 8260D	7-5-22	7-5-22	
1,1-Dichloroethene	ND	0.0013	EPA 8260D	7-5-22	7-5-22	
Acetone	ND	0.013	EPA 8260D	7-5-22	7-5-22	
Iodomethane	ND	0.012	EPA 8260D	7-5-22	7-5-22	
Carbon Disulfide	ND	0.0013	EPA 8260D	7-5-22	7-5-22	
Methylene Chloride	ND	0.0065	EPA 8260D	7-5-22	7-5-22	
(trans) 1,2-Dichloroethene	ND	0.0013	EPA 8260D	7-5-22	7-5-22	
Methyl t-Butyl Ether	ND	0.0013	EPA 8260D	7-5-22	7-5-22	
1,1-Dichloroethane	ND	0.0013	EPA 8260D	7-5-22	7-5-22	
Vinyl Acetate	ND	0.0065	EPA 8260D	7-5-22	7-5-22	
2,2-Dichloropropane	ND	0.0013	EPA 8260D	7-5-22	7-5-22	
(cis) 1,2-Dichloroethene	ND	0.0013	EPA 8260D	7-5-22	7-5-22	
2-Butanone	ND	0.0065	EPA 8260D	7-5-22	7-5-22	
Bromochloromethane	ND	0.0013	EPA 8260D	7-5-22	7-5-22	
Chloroform	ND	0.0013	EPA 8260D	7-5-22	7-5-22	
1,1,1-Trichloroethane	ND	0.0013	EPA 8260D	7-5-22	7-5-22	
Carbon Tetrachloride	ND	0.0013	EPA 8260D	7-5-22	7-5-22	
1,1-Dichloropropene	ND	0.0013	EPA 8260D	7-5-22	7-5-22	
Benzene	ND	0.0013	EPA 8260D	7-5-22	7-5-22	
1,2-Dichloroethane	ND	0.0013	EPA 8260D	7-5-22	7-5-22	
Trichloroethene	ND	0.0013	EPA 8260D	7-5-22	7-5-22	
1,2-Dichloropropane	ND	0.0013	EPA 8260D	7-5-22	7-5-22	
Dibromomethane	ND	0.0013	EPA 8260D	7-5-22	7-5-22	
Bromodichloromethane	ND	0.0013	EPA 8260D	7-5-22	7-5-22	
2-Chloroethyl Vinyl Ether	ND	0.0065	EPA 8260D	7-5-22	7-5-22	
(cis) 1,3-Dichloropropene	ND	0.0013	EPA 8260D	7-5-22	7-5-22	
Methyl Isobutyl Ketone	ND	0.0065	EPA 8260D	7-5-22	7-5-22	
Toluene	ND	0.0065	EPA 8260D	7-5-22	7-5-22	
(trans) 1,3-Dichloropropene	ND	0.0013	EPA 8260D	7-5-22	7-5-22	



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 Project: 105474-050

**VOLATILE ORGANICS EPA 8260D**  
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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>FL358-MW9-Soil IDW</b>					
Laboratory ID:	06-318-06					
1,1,2-Trichloroethane	ND	0.0013	EPA 8260D	7-5-22	7-5-22	
Tetrachloroethene	ND	0.0013	EPA 8260D	7-5-22	7-5-22	
1,3-Dichloropropane	ND	0.0013	EPA 8260D	7-5-22	7-5-22	
2-Hexanone	ND	0.0065	EPA 8260D	7-5-22	7-5-22	
Dibromochloromethane	ND	0.0013	EPA 8260D	7-5-22	7-5-22	
1,2-Dibromoethane	ND	0.0013	EPA 8260D	7-5-22	7-5-22	
Chlorobenzene	ND	0.0013	EPA 8260D	7-5-22	7-5-22	
1,1,1,2-Tetrachloroethane	ND	0.0013	EPA 8260D	7-5-22	7-5-22	
Ethylbenzene	ND	0.0013	EPA 8260D	7-5-22	7-5-22	
m,p-Xylene	ND	0.0026	EPA 8260D	7-5-22	7-5-22	
o-Xylene	ND	0.0013	EPA 8260D	7-5-22	7-5-22	
Styrene	ND	0.0013	EPA 8260D	7-5-22	7-5-22	
Bromoform	ND	0.0065	EPA 8260D	7-5-22	7-5-22	
Isopropylbenzene	ND	0.0013	EPA 8260D	7-5-22	7-5-22	
Bromobenzene	ND	0.0013	EPA 8260D	7-5-22	7-5-22	
1,1,2,2-Tetrachloroethane	ND	0.0013	EPA 8260D	7-5-22	7-5-22	
1,2,3-Trichloropropane	ND	0.0013	EPA 8260D	7-5-22	7-5-22	
n-Propylbenzene	ND	0.0013	EPA 8260D	7-5-22	7-5-22	
2-Chlorotoluene	ND	0.0013	EPA 8260D	7-5-22	7-5-22	
4-Chlorotoluene	ND	0.0013	EPA 8260D	7-5-22	7-5-22	
1,3,5-Trimethylbenzene	ND	0.0013	EPA 8260D	7-5-22	7-5-22	
tert-Butylbenzene	ND	0.0013	EPA 8260D	7-5-22	7-5-22	
1,2,4-Trimethylbenzene	ND	0.0013	EPA 8260D	7-5-22	7-5-22	
sec-Butylbenzene	ND	0.0013	EPA 8260D	7-5-22	7-5-22	
1,3-Dichlorobenzene	ND	0.0013	EPA 8260D	7-5-22	7-5-22	
p-Isopropyltoluene	ND	0.0013	EPA 8260D	7-5-22	7-5-22	
1,4-Dichlorobenzene	ND	0.0013	EPA 8260D	7-5-22	7-5-22	
1,2-Dichlorobenzene	ND	0.0013	EPA 8260D	7-5-22	7-5-22	
n-Butylbenzene	ND	0.0013	EPA 8260D	7-5-22	7-5-22	
1,2-Dibromo-3-chloropropane	ND	0.0065	EPA 8260D	7-5-22	7-5-22	
1,2,4-Trichlorobenzene	ND	0.0013	EPA 8260D	7-5-22	7-5-22	
Hexachlorobutadiene	ND	0.0065	EPA 8260D	7-5-22	7-5-22	
Naphthalene	ND	0.0065	EPA 8260D	7-5-22	7-5-22	
1,2,3-Trichlorobenzene	ND	0.0013	EPA 8260D	7-5-22	7-5-22	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>107</i>	<i>75-130</i>				
<i>Toluene-d8</i>	<i>102</i>	<i>78-128</i>				
<i>4-Bromofluorobenzene</i>	<i>100</i>	<i>71-130</i>				



Date of Report: August 5, 2022  
 Samples Submitted: June 29, 2022  
 Laboratory Reference: 2206-318  
 Project: 105474-050

**VOLATILE ORGANICS EPA 8260D  
 QUALITY CONTROL**

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Matrix: Soil  
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>METHOD BLANK</b>						
Laboratory ID:	MB0705S1					
Dichlorodifluoromethane	ND	0.0014	EPA 8260D	7-5-22	7-5-22	
Chloromethane	ND	0.0050	EPA 8260D	7-5-22	7-5-22	
Vinyl Chloride	ND	0.0010	EPA 8260D	7-5-22	7-5-22	
Bromomethane	ND	0.010	EPA 8260D	7-5-22	7-5-22	
Chloroethane	ND	0.0050	EPA 8260D	7-5-22	7-5-22	
Trichlorofluoromethane	ND	0.0010	EPA 8260D	7-5-22	7-5-22	
1,1-Dichloroethene	ND	0.0010	EPA 8260D	7-5-22	7-5-22	
Acetone	ND	0.010	EPA 8260D	7-5-22	7-5-22	
Iodomethane	ND	0.0092	EPA 8260D	7-5-22	7-5-22	
Carbon Disulfide	ND	0.0010	EPA 8260D	7-5-22	7-5-22	
Methylene Chloride	ND	0.0050	EPA 8260D	7-5-22	7-5-22	
(trans) 1,2-Dichloroethene	ND	0.0010	EPA 8260D	7-5-22	7-5-22	
Methyl t-Butyl Ether	ND	0.0010	EPA 8260D	7-5-22	7-5-22	
1,1-Dichloroethane	ND	0.0010	EPA 8260D	7-5-22	7-5-22	
Vinyl Acetate	ND	0.0050	EPA 8260D	7-5-22	7-5-22	
2,2-Dichloropropane	ND	0.0010	EPA 8260D	7-5-22	7-5-22	
(cis) 1,2-Dichloroethene	ND	0.0010	EPA 8260D	7-5-22	7-5-22	
2-Butanone	ND	0.0050	EPA 8260D	7-5-22	7-5-22	
Bromochloromethane	ND	0.0010	EPA 8260D	7-5-22	7-5-22	
Chloroform	ND	0.0010	EPA 8260D	7-5-22	7-5-22	
1,1,1-Trichloroethane	ND	0.0010	EPA 8260D	7-5-22	7-5-22	
Carbon Tetrachloride	ND	0.0010	EPA 8260D	7-5-22	7-5-22	
1,1-Dichloropropene	ND	0.0010	EPA 8260D	7-5-22	7-5-22	
Benzene	ND	0.0010	EPA 8260D	7-5-22	7-5-22	
1,2-Dichloroethane	ND	0.0010	EPA 8260D	7-5-22	7-5-22	
Trichloroethene	ND	0.0010	EPA 8260D	7-5-22	7-5-22	
1,2-Dichloropropane	ND	0.0010	EPA 8260D	7-5-22	7-5-22	
Dibromomethane	ND	0.0010	EPA 8260D	7-5-22	7-5-22	
Bromodichloromethane	ND	0.0010	EPA 8260D	7-5-22	7-5-22	
2-Chloroethyl Vinyl Ether	ND	0.0050	EPA 8260D	7-5-22	7-5-22	
(cis) 1,3-Dichloropropene	ND	0.0010	EPA 8260D	7-5-22	7-5-22	
Methyl Isobutyl Ketone	ND	0.0050	EPA 8260D	7-5-22	7-5-22	
Toluene	ND	0.0050	EPA 8260D	7-5-22	7-5-22	
(trans) 1,3-Dichloropropene	ND	0.0010	EPA 8260D	7-5-22	7-5-22	



Date of Report: August 5, 2022  
 Samples Submitted: June 29, 2022  
 Laboratory Reference: 2206-318  
 Project: 105474-050

**VOLATILE ORGANICS EPA 8260D  
 QUALITY CONTROL**

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>METHOD BLANK</b>						
Laboratory ID:	MB0705S1					
1,1,2-Trichloroethane	ND	0.0010	EPA 8260D	7-5-22	7-5-22	
Tetrachloroethene	ND	0.0010	EPA 8260D	7-5-22	7-5-22	
1,3-Dichloropropane	ND	0.0010	EPA 8260D	7-5-22	7-5-22	
2-Hexanone	ND	0.0050	EPA 8260D	7-5-22	7-5-22	
Dibromochloromethane	ND	0.0010	EPA 8260D	7-5-22	7-5-22	
1,2-Dibromoethane	ND	0.0010	EPA 8260D	7-5-22	7-5-22	
Chlorobenzene	ND	0.0010	EPA 8260D	7-5-22	7-5-22	
1,1,1,2-Tetrachloroethane	ND	0.0010	EPA 8260D	7-5-22	7-5-22	
Ethylbenzene	ND	0.0010	EPA 8260D	7-5-22	7-5-22	
m,p-Xylene	ND	0.0020	EPA 8260D	7-5-22	7-5-22	
o-Xylene	ND	0.0010	EPA 8260D	7-5-22	7-5-22	
Styrene	ND	0.0010	EPA 8260D	7-5-22	7-5-22	
Bromoform	ND	0.0050	EPA 8260D	7-5-22	7-5-22	
Isopropylbenzene	ND	0.0010	EPA 8260D	7-5-22	7-5-22	
Bromobenzene	ND	0.0010	EPA 8260D	7-5-22	7-5-22	
1,1,2,2-Tetrachloroethane	ND	0.0010	EPA 8260D	7-5-22	7-5-22	
1,2,3-Trichloropropane	ND	0.0010	EPA 8260D	7-5-22	7-5-22	
n-Propylbenzene	ND	0.0010	EPA 8260D	7-5-22	7-5-22	
2-Chlorotoluene	ND	0.0010	EPA 8260D	7-5-22	7-5-22	
4-Chlorotoluene	ND	0.0010	EPA 8260D	7-5-22	7-5-22	
1,3,5-Trimethylbenzene	ND	0.0010	EPA 8260D	7-5-22	7-5-22	
tert-Butylbenzene	ND	0.0010	EPA 8260D	7-5-22	7-5-22	
1,2,4-Trimethylbenzene	ND	0.0010	EPA 8260D	7-5-22	7-5-22	
sec-Butylbenzene	ND	0.0010	EPA 8260D	7-5-22	7-5-22	
1,3-Dichlorobenzene	ND	0.0010	EPA 8260D	7-5-22	7-5-22	
p-Isopropyltoluene	ND	0.0010	EPA 8260D	7-5-22	7-5-22	
1,4-Dichlorobenzene	ND	0.0010	EPA 8260D	7-5-22	7-5-22	
1,2-Dichlorobenzene	ND	0.0010	EPA 8260D	7-5-22	7-5-22	
n-Butylbenzene	ND	0.0010	EPA 8260D	7-5-22	7-5-22	
1,2-Dibromo-3-chloropropane	ND	0.0050	EPA 8260D	7-5-22	7-5-22	
1,2,4-Trichlorobenzene	ND	0.0010	EPA 8260D	7-5-22	7-5-22	
Hexachlorobutadiene	ND	0.0050	EPA 8260D	7-5-22	7-5-22	
Naphthalene	ND	0.0050	EPA 8260D	7-5-22	7-5-22	
1,2,3-Trichlorobenzene	ND	0.0010	EPA 8260D	7-5-22	7-5-22	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>99</i>	<i>75-130</i>				
<i>Toluene-d8</i>	<i>100</i>	<i>78-128</i>				
<i>4-Bromofluorobenzene</i>	<i>100</i>	<i>71-130</i>				



Date of Report: August 5, 2022  
 Samples Submitted: June 29, 2022  
 Laboratory Reference: 2206-318  
 Project: 105474-050

**VOLATILE ORGANICS EPA 8260D  
 QUALITY CONTROL**

Matrix: Soil  
 Units: mg/kg

Analyte	Result		Spike Level		Percent Recovery		Recovery	RPD	RPD	Flags
					Recovery	Limits	RPD	Limit		
<b>SPIKE BLANKS</b>										
Laboratory ID:	SB0705S1									
	SB	SBD	SB	SBD	SB	SBD				
1,1-Dichloroethene	<b>0.0527</b>	<b>0.0513</b>	0.0500	0.0500	105	103	75-129	3	19	
Benzene	<b>0.0515</b>	<b>0.0502</b>	0.0500	0.0500	103	100	80-122	3	18	
Trichloroethene	<b>0.0527</b>	<b>0.0518</b>	0.0500	0.0500	105	104	80-129	2	18	
Toluene	<b>0.0534</b>	<b>0.0518</b>	0.0500	0.0500	107	104	80-120	3	18	
Chlorobenzene	<b>0.0519</b>	<b>0.0520</b>	0.0500	0.0500	104	104	80-120	0	18	
<i>Surrogate:</i>										
<i>Dibromofluoromethane</i>					<i>102</i>	<i>100</i>	<i>75-130</i>			
<i>Toluene-d8</i>					<i>101</i>	<i>101</i>	<i>78-128</i>			
<i>4-Bromofluorobenzene</i>					<i>102</i>	<i>103</i>	<i>71-130</i>			



Date of Report: August 5, 2022  
 Samples Submitted: June 29, 2022  
 Laboratory Reference: 2206-318  
 Project: 105474-050

**TOTAL METALS  
 EPA 6010D/7471B**

Matrix: Soil  
 Units: mg/Kg (ppm)

<b>Analyte</b>	<b>Result</b>	<b>PQL</b>	<b>Method</b>	<b>Date Prepared</b>	<b>Date Analyzed</b>	<b>Flags</b>
<b>Client ID:</b>		<b>FL358-MW10-Soil IDW</b>				
Laboratory ID:		06-318-01				
Arsenic	<b>ND</b>	11	EPA 6010D	7-8-22	7-8-22	
Barium	<b>33</b>	2.9	EPA 6010D	7-8-22	7-8-22	
Cadmium	<b>ND</b>	0.57	EPA 6010D	7-8-22	7-8-22	
Chromium	<b>22</b>	0.57	EPA 6010D	7-8-22	7-8-22	
Copper	<b>11</b>	1.1	EPA 6010D	7-8-22	7-8-22	
Lead	<b>ND</b>	5.7	EPA 6010D	7-8-22	7-8-22	
Mercury	<b>ND</b>	0.29	EPA 7471B	7-6-22	7-6-22	
Nickel	<b>19</b>	2.9	EPA 6010D	7-8-22	7-8-22	
Selenium	<b>ND</b>	11	EPA 6010D	7-8-22	7-8-22	
Silver	<b>ND</b>	1.1	EPA 6010D	7-8-22	7-8-22	
Zinc	<b>22</b>	2.9	EPA 6010D	7-8-22	7-8-22	

<b>Client ID:</b>		<b>FL358-MW11-Soil IDW</b>				
Laboratory ID:		06-318-02				
Arsenic	<b>ND</b>	12	EPA 6010D	7-8-22	7-8-22	
Barium	<b>50</b>	3.0	EPA 6010D	7-8-22	7-8-22	
Cadmium	<b>ND</b>	0.59	EPA 6010D	7-8-22	7-8-22	
Chromium	<b>23</b>	0.59	EPA 6010D	7-8-22	7-8-22	
Copper	<b>12</b>	1.2	EPA 6010D	7-8-22	7-8-22	
Lead	<b>ND</b>	5.9	EPA 6010D	7-8-22	7-8-22	
Mercury	<b>ND</b>	0.30	EPA 7471B	7-6-22	7-6-22	
Nickel	<b>25</b>	3.0	EPA 6010D	7-8-22	7-8-22	
Selenium	<b>ND</b>	12	EPA 6010D	7-8-22	7-8-22	
Silver	<b>ND</b>	1.2	EPA 6010D	7-8-22	7-8-22	
Zinc	<b>27</b>	3.0	EPA 6010D	7-8-22	7-8-22	



Date of Report: August 5, 2022  
 Samples Submitted: June 29, 2022  
 Laboratory Reference: 2206-318  
 Project: 105474-050

**TOTAL METALS  
 EPA 6010D/7471B**

Matrix: Soil  
 Units: mg/Kg (ppm)

<b>Analyte</b>	<b>Result</b>	<b>PQL</b>	<b>Method</b>	<b>Date Prepared</b>	<b>Date Analyzed</b>	<b>Flags</b>
<b>Client ID:</b>	<b>FL358-MW13-Soil IDW</b>					
Laboratory ID:	06-318-03					
Arsenic	ND	11	EPA 6010D	7-8-22	7-8-22	
Barium	62	2.8	EPA 6010D	7-8-22	7-8-22	
Cadmium	ND	0.57	EPA 6010D	7-8-22	7-8-22	
Chromium	31	0.57	EPA 6010D	7-8-22	7-8-22	
Copper	16	1.1	EPA 6010D	7-8-22	7-8-22	
Lead	ND	5.7	EPA 6010D	7-8-22	7-8-22	
Mercury	ND	0.28	EPA 7471B	7-6-22	7-6-22	
Nickel	34	2.8	EPA 6010D	7-8-22	7-8-22	
Selenium	ND	11	EPA 6010D	7-8-22	7-8-22	
Silver	ND	1.1	EPA 6010D	7-8-22	7-8-22	
Zinc	34	2.8	EPA 6010D	7-8-22	7-8-22	

<b>Client ID:</b>	<b>FL358-MW14-Soil IDW</b>					
Laboratory ID:	06-318-04					
Arsenic	ND	12	EPA 6010D	7-8-22	7-8-22	
Barium	54	2.9	EPA 6010D	7-8-22	7-8-22	
Cadmium	ND	0.58	EPA 6010D	7-8-22	7-8-22	
Chromium	29	0.58	EPA 6010D	7-8-22	7-8-22	
Copper	16	1.2	EPA 6010D	7-8-22	7-8-22	
Lead	ND	5.8	EPA 6010D	7-8-22	7-8-22	
Mercury	ND	0.29	EPA 7471B	7-6-22	7-6-22	
Nickel	30	2.9	EPA 6010D	7-8-22	7-8-22	
Selenium	ND	12	EPA 6010D	7-8-22	7-8-22	
Silver	ND	1.2	EPA 6010D	7-8-22	7-8-22	
Zinc	33	2.9	EPA 6010D	7-8-22	7-8-22	



Date of Report: August 5, 2022  
 Samples Submitted: June 29, 2022  
 Laboratory Reference: 2206-318  
 Project: 105474-050

**TOTAL METALS  
 EPA 6010D/7471B**

Matrix: Soil  
 Units: mg/Kg (ppm)

<b>Analyte</b>	<b>Result</b>	<b>PQL</b>	<b>Method</b>	<b>Date Prepared</b>	<b>Date Analyzed</b>	<b>Flags</b>
<b>Client ID:</b>	<b>FL358-MW8-Soil IDW</b>					
Laboratory ID:	06-318-05					
Arsenic	<b>ND</b>	12	EPA 6010D	7-8-22	7-8-22	
Barium	<b>49</b>	2.9	EPA 6010D	7-8-22	7-8-22	
Cadmium	<b>ND</b>	0.58	EPA 6010D	7-8-22	7-8-22	
Chromium	<b>17</b>	0.58	EPA 6010D	7-8-22	7-8-22	
Copper	<b>9.1</b>	1.2	EPA 6010D	7-8-22	7-8-22	
Lead	<b>ND</b>	5.8	EPA 6010D	7-8-22	7-8-22	
Mercury	<b>ND</b>	0.29	EPA 7471B	7-6-22	7-6-22	
Nickel	<b>19</b>	2.9	EPA 6010D	7-8-22	7-8-22	
Selenium	<b>ND</b>	12	EPA 6010D	7-8-22	7-8-22	
Silver	<b>ND</b>	1.2	EPA 6010D	7-8-22	7-8-22	
Zinc	<b>20</b>	2.9	EPA 6010D	7-8-22	7-8-22	

<b>Client ID:</b>	<b>FL358-MW9-Soil IDW</b>					
Laboratory ID:	06-318-06					
Arsenic	<b>ND</b>	12	EPA 6010D	7-8-22	7-8-22	
Barium	<b>42</b>	2.9	EPA 6010D	7-8-22	7-8-22	
Cadmium	<b>ND</b>	0.58	EPA 6010D	7-8-22	7-8-22	
Chromium	<b>22</b>	0.58	EPA 6010D	7-8-22	7-8-22	
Copper	<b>11</b>	1.2	EPA 6010D	7-8-22	7-8-22	
Lead	<b>ND</b>	5.8	EPA 6010D	7-8-22	7-8-22	
Mercury	<b>ND</b>	0.29	EPA 7471B	7-6-22	7-6-22	
Nickel	<b>24</b>	2.9	EPA 6010D	7-8-22	7-8-22	
Selenium	<b>ND</b>	12	EPA 6010D	7-8-22	7-8-22	
Silver	<b>ND</b>	1.2	EPA 6010D	7-8-22	7-8-22	
Zinc	<b>25</b>	2.9	EPA 6010D	7-8-22	7-8-22	



Date of Report: August 5, 2022  
 Samples Submitted: June 29, 2022  
 Laboratory Reference: 2206-318  
 Project: 105474-050

**TOTAL METALS  
 EPA 6010D/7471B  
 QUALITY CONTROL**

Matrix: Soil  
 Units: mg/Kg (ppm)

<b>Analyte</b>	<b>Result</b>	<b>PQL</b>	<b>Method</b>	<b>Date Prepared</b>	<b>Date Analyzed</b>	<b>Flags</b>
<b>METHOD BLANK</b>						
Laboratory ID:	MB0708SM3					
Arsenic	ND	10	EPA 6010D	7-8-22	7-8-22	
Barium	ND	2.5	EPA 6010D	7-8-22	7-8-22	
Cadmium	ND	0.50	EPA 6010D	7-8-22	7-8-22	
Chromium	ND	0.50	EPA 6010D	7-8-22	7-8-22	
Copper	ND	1.0	EPA 6010D	7-8-22	7-8-22	
Lead	ND	5.0	EPA 6010D	7-8-22	7-8-22	
Nickel	ND	2.5	EPA 6010D	7-8-22	7-8-22	
Selenium	ND	10	EPA 6010D	7-8-22	7-8-22	
Silver	ND	1.0	EPA 6010D	7-8-22	7-8-22	
Zinc	ND	2.5	EPA 6010D	7-8-22	7-8-22	
Laboratory ID:	MB0706S2					
Mercury	ND	0.25	EPA 7471B	7-6-22	7-6-22	



Date of Report: August 5, 2022  
 Samples Submitted: June 29, 2022  
 Laboratory Reference: 2206-318  
 Project: 105474-050

**TOTAL METALS  
 EPA 6010D/7471B  
 QUALITY CONTROL**

Matrix: Soil  
 Units: mg/Kg (ppm)

Analyte	Result		Spike Level		Source	Percent	Recovery	RPD		Flags
	Result	Result	Result	Result	Result	Recovery	Limits	RPD	Limit	
<b>DUPLICATE</b>										
Laboratory ID:	06-312-20									
	ORIG	DUP								
Arsenic	ND	ND	NA	NA		NA	NA	NA	20	
Barium	51.5	42.1	NA	NA		NA	NA	20	20	
Cadmium	ND	ND	NA	NA		NA	NA	NA	20	
Chromium	17.0	16.0	NA	NA		NA	NA	6	20	
Copper	15.7	14.9	NA	NA		NA	NA	5	20	
Lead	11.2	11.1	NA	NA		NA	NA	1	20	
Nickel	19.2	17.0	NA	NA		NA	NA	12	20	
Selenium	ND	ND	NA	NA		NA	NA	NA	20	
Silver	ND	ND	NA	NA		NA	NA	NA	20	
Zinc	37.1	37.6	NA	NA		NA	NA	1	20	

Laboratory ID:	06-300-24									
Mercury	ND	ND	NA	NA		NA	NA	NA	NA	20

**MATRIX SPIKES**

Laboratory ID:	06-312-20									
	MS	MSD	MS	MSD		MS	MSD			
Arsenic	103	102	100	100	ND	103	102	75-125	1	20
Barium	148	153	100	100	51.5	96	102	75-125	4	20
Cadmium	45.9	46.8	50.0	50.0	ND	92	94	75-125	2	20
Chromium	119	118	100	100	17.0	102	101	75-125	1	20
Copper	64.1	67.1	50.0	50.0	15.7	97	103	75-125	5	20
Lead	256	266	250	250	11.2	98	102	75-125	4	20
Nickel	116	117	100	100	19.2	97	98	75-125	1	20
Selenium	95.6	96.2	100	100	ND	96	96	75-125	1	20
Silver	23.6	24.1	25.0	25.0	ND	94	96	75-125	2	20
Zinc	134	139	100	100	37.1	97	102	75-125	4	20

Laboratory ID:	06-300-24									
Mercury	0.598	0.578	0.500	0.500	0.0819	103	99	80-120	3	20



Date of Report: August 5, 2022  
Samples Submitted: June 29, 2022  
Laboratory Reference: 2206-318  
Project: 105474-050

**% MOISTURE**

<b>Client ID</b>	<b>Lab ID</b>	<b>% Moisture</b>	<b>Date Analyzed</b>
FL358-MW10-Soil IDW	06-318-01	13	7-5-22
FL358-MW11-Soil IDW	06-318-02	16	7-5-22
FL358-MW13-Soil IDW	06-318-03	12	7-5-22
FL358-MW14-Soil IDW	06-318-04	14	7-5-22
FL358-MW8-Soil IDW	06-318-05	14	7-5-22
FL358-MW9-Soil IDW	06-318-06	14	7-5-22





### Data Qualifiers and Abbreviations

- A - Due to a high sample concentration, the amount spiked is insufficient for meaningful MS/MSD recovery data.
  - B - The analyte indicated was also found in the blank sample.
  - C - The duplicate RPD is outside control limits due to high result variability when analyte concentrations are within five times the quantitation limit.
  - E - The value reported exceeds the quantitation range and is an estimate.
  - F - Surrogate recovery data is not available due to the high concentration of coeluting target compounds.
  - H - The analyte indicated is a common laboratory solvent and may have been introduced during sample preparation, and be impacting the sample result.
  - I - Compound recovery is outside of the control limits.
  - J - The value reported was below the practical quantitation limit. The value is an estimate.
  - K - Sample duplicate RPD is outside control limits due to sample inhomogeneity. The sample was re-extracted and re-analyzed with similar results.
  - L - The RPD is outside of the control limits.
  - M - Hydrocarbons in the gasoline range are impacting the diesel range result.
  - M1 - Hydrocarbons in the gasoline range (toluene-naphthalene) are present in the sample.
  - N - Hydrocarbons in the lube oil range are impacting the diesel range result.
  - N1 - Hydrocarbons in diesel range are impacting lube oil range results.
  - O - Hydrocarbons indicative of heavier fuels are present in the sample and are impacting the gasoline result.
  - P - The RPD of the detected concentrations between the two columns is greater than 40.
  - Q - Surrogate recovery is outside of the control limits.
  - S - Surrogate recovery data is not available due to the necessary dilution of the sample.
  - T - The sample chromatogram is not similar to a typical \_\_\_\_\_.
  - U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.
  - U1 - The practical quantitation limit is elevated due to interferences present in the sample.
  - V - Matrix Spike/Matrix Spike Duplicate recoveries are outside control limits due to matrix effects.
  - W - Matrix Spike/Matrix Spike Duplicate RPD are outside control limits due to matrix effects.
  - X - Sample extract treated with a mercury cleanup procedure.
  - X1 - Sample extract treated with a sulfuric acid/silica gel cleanup procedure.
  - X2 - Sample extract treated with a silica gel cleanup procedure.
  - Y - The calibration verification for this analyte exceeded the 20% drift specified in methods 8260 & 8270, and therefore the reported result should be considered an estimate. The overall performance of the calibration verification standard met the acceptance criteria of the method.
  - Y1 - Negative effects of the matrix from this sample on the instrument caused values for this analyte in the bracketing continuing calibration verification standard (CCVs) to be outside of 20% acceptance criteria. Because of this, quantitation limits and sample concentrations should be considered estimates.
  - Z -
- ND - Not Detected at PQL  
 PQL - Practical Quantitation Limit  
 RPD - Relative Percent Difference





3600 Fremont Ave. N.  
Seattle, WA 98103  
T: (206) 352-3790  
F: (206) 352-7178  
info@fremontanalytical.com

**OnSite Environmental Inc**

David Baumeister  
14648 NE 95th Street  
Redmond, WA 98052

**RE: FL358 Monitoring Well**  
**Work Order Number: 2206458**

July 05, 2022

**Attention David Baumeister:**

Fremont Analytical, Inc. received 2 sample(s) on 6/28/2022 for the analyses presented in the following report.

***Ferrous Iron by SM3500-Fe B***

This report consists of the following:

- Case Narrative
- Analytical Results
- Applicable Quality Control Summary Reports
- Chain of Custody

All analyses were performed consistent with the Quality Assurance program of Fremont Analytical, Inc. Please contact the laboratory if you should have any questions about the results.

Thank you for using Fremont Analytical.

Sincerely,

Brianna Barnes  
Project Manager

*DoD-ELAP Accreditation #79636 by PJLA, ISO/IEC 17025:2017 and QSM 5.3 for Environmental Testing  
ORELAP Certification: WA 100009 (NELAP Recognized) for Environmental Testing  
Washington State Department of Ecology Accredited for Environmental Testing, Lab ID C910*

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Original



Date: 07/05/2022

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**CLIENT:** OnSite Environmental Inc  
**Project:** FL358 Monitoring Well  
**Work Order:** 2206458

## Work Order Sample Summary

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Lab Sample ID	Client Sample ID	Date/Time Collected	Date/Time Received
2206458-001	FL358-MW10-220627	06/27/2022 12:30 PM	06/28/2022 8:58 AM
2206458-002	FL358-MW11-220627	06/27/2022 2:35 PM	06/28/2022 8:58 AM

Note: If no "Time Collected" is supplied, a default of 12:00AM is assigned

---

Original

**CLIENT:** OnSite Environmental Inc

**Project:** FL358 Monitoring Well

---

**I. SAMPLE RECEIPT:**

Samples receipt information is recorded on the attached Sample Receipt Checklist.

**II. GENERAL REPORTING COMMENTS:**

Results are reported on a wet weight basis unless dry-weight correction is denoted in the units field on the analytical report ("mg/kg-dry" or "ug/kg-dry").

Matrix Spike (MS) and MS Duplicate (MSD) samples are tested from an analytical batch of "like" matrix to check for possible matrix effect. The MS and MSD will provide site specific matrix data only for those samples which are spiked by the laboratory. The sample chosen for spike purposes may or may not have been a sample submitted in this sample delivery group. The validity of the analytical procedures for which data is reported in this analytical report is determined by the Laboratory Control Sample (LCS) and the Method Blank (MB). The LCS and the MB are processed with the samples and the MS/MSD to ensure method criteria are achieved throughout the entire analytical process.

**III. ANALYSES AND EXCEPTIONS:**

Exceptions associated with this report will be footnoted in the analytical results page(s) or the quality control summary page(s) and/or noted below.

---

Qualifiers:

- \* - Flagged value is not within established control limits
- B - Analyte detected in the associated Method Blank
- D - Dilution was required
- E - Value above quantitation range
- H - Holding times for preparation or analysis exceeded
- I - Analyte with an internal standard that does not meet established acceptance criteria
- J - Analyte detected below Reporting Limit
- N - Tentatively Identified Compound (TIC)
- Q - Analyte with an initial or continuing calibration that does not meet established acceptance criteria
- S - Spike recovery outside accepted recovery limits
- ND - Not detected at the Reporting Limit
- R - High relative percent difference observed

Acronyms:

- %Rec - Percent Recovery
- CCB - Continued Calibration Blank
- CCV - Continued Calibration Verification
- DF - Dilution Factor
- DUP - Sample Duplicate
- HEM - Hexane Extractable Material
- ICV - Initial Calibration Verification
- LCS/LCSD - Laboratory Control Sample / Laboratory Control Sample Duplicate
- MCL - Maximum Contaminant Level
- MB or MBLANK - Method Blank
- MDL - Method Detection Limit
- MS/MSD - Matrix Spike / Matrix Spike Duplicate
- PDS - Post Digestion Spike
- Ref Val - Reference Value
- REP - Sample Replicate
- RL - Reporting Limit
- RPD - Relative Percent Difference
- SD - Serial Dilution
- SGT - Silica Gel Treatment
- SPK - Spike
- Surr - Surrogate



**Client:** OnSite Environmental Inc

**Collection Date:** 6/27/2022 12:30:00 PM

**Project:** FL358 Monitoring Well

**Lab ID:** 2206458-001

**Matrix:** Water

**Client Sample ID:** FL358-MW10-220627

<b>Analyses</b>	<b>Result</b>	<b>RL</b>	<b>Qual</b>	<b>Units</b>	<b>DF</b>	<b>Date Analyzed</b>
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**Ferrous Iron by SM3500-Fe B**

Batch ID: R76503      Analyst: ALT

Ferrous Iron	29.3	2.50	D	mg/L	25	6/28/2022 11:17:00 AM
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**Client:** OnSite Environmental Inc

**Collection Date:** 6/27/2022 2:35:00 PM

**Project:** FL358 Monitoring Well

**Lab ID:** 2206458-002

**Matrix:** Water

**Client Sample ID:** FL358-MW11-220627

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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**Ferrous Iron by SM3500-Fe B**

Batch ID: R76503      Analyst: ALT

Ferrous Iron	55.5	12.5	D	mg/L	125	6/28/2022 11:17:00 AM
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**Work Order:** 2206458  
**CLIENT:** OnSite Environmental Inc  
**Project:** FL358 Monitoring Well

**QC SUMMARY REPORT**  
**Ferrous Iron by SM3500-Fe B**

Sample ID: <b>MB-R76503</b>	SampType: <b>MBLK</b>	Units: <b>mg/L</b>	Prep Date: <b>6/28/2022</b>	RunNo: <b>76503</b>							
Client ID: <b>MBLKW</b>	Batch ID: <b>R76503</b>	Analysis Date: <b>6/28/2022</b>	SeqNo: <b>1569681</b>								
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Ferrous Iron ND 0.100

Sample ID: <b>LCS-R76503</b>	SampType: <b>LCS</b>	Units: <b>mg/L</b>	Prep Date: <b>6/28/2022</b>	RunNo: <b>76503</b>							
Client ID: <b>LCSW</b>	Batch ID: <b>R76503</b>	Analysis Date: <b>6/28/2022</b>	SeqNo: <b>1569682</b>								
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Ferrous Iron 0.404 0.100 0.4000 0 101 85 115

Sample ID: <b>2206458-002ADUP</b>	SampType: <b>DUP</b>	Units: <b>mg/L</b>	Prep Date: <b>6/28/2022</b>	RunNo: <b>76503</b>							
Client ID: <b>FL358-MW11-220627</b>	Batch ID: <b>R76503</b>	Analysis Date: <b>6/28/2022</b>	SeqNo: <b>1569685</b>								
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Ferrous Iron 55.9 12.5 55.48 0.736 20 D

Sample ID: <b>2206458-002AMS</b>	SampType: <b>MS</b>	Units: <b>mg/L</b>	Prep Date: <b>6/28/2022</b>	RunNo: <b>76503</b>							
Client ID: <b>FL358-MW11-220627</b>	Batch ID: <b>R76503</b>	Analysis Date: <b>6/28/2022</b>	SeqNo: <b>1569686</b>								
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Ferrous Iron 117 12.5 50.00 55.48 124 70 130 D

Sample ID: <b>2206458-002AMSD</b>	SampType: <b>MSD</b>	Units: <b>mg/L</b>	Prep Date: <b>6/28/2022</b>	RunNo: <b>76503</b>							
Client ID: <b>FL358-MW11-220627</b>	Batch ID: <b>R76503</b>	Analysis Date: <b>6/28/2022</b>	SeqNo: <b>1569687</b>								
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Ferrous Iron 108 12.5 50.00 55.48 105 70 130 117.4 8.37 30 D

Client Name: ONSITE	Work Order Number: 2206458
Logged by: Elisabeth Samoray	Date Received: 6/28/2022 8:58:00 AM

**Chain of Custody**

1. Is Chain of Custody complete?      Yes       No       Not Present
2. How was the sample delivered?      Courier

**Log In**

3. Coolers are present?      Yes       No       NA
4. Shipping container/cooler in good condition?      Yes       No
5. Custody Seals present on shipping container/cooler?  
(Refer to comments for Custody Seals not intact)      Yes       No       Not Present
6. Was an attempt made to cool the samples?      Yes       No       NA
7. Were all items received at a temperature of >2°C to 6°C \*      Yes       No       NA
8. Sample(s) in proper container(s)?      Yes       No
9. Sufficient sample volume for indicated test(s)?      Yes       No
10. Are samples properly preserved?      Yes       No
11. Was preservative added to bottles?      Yes       No       NA
12. Is there headspace in the VOA vials?      Yes       No       NA
13. Did all samples containers arrive in good condition(unbroken)?      Yes       No
14. Does paperwork match bottle labels?      Yes       No
15. Are matrices correctly identified on Chain of Custody?      Yes       No
16. Is it clear what analyses were requested?      Yes       No
17. Were all holding times able to be met?      Yes       No

**Special Handling (if applicable)**

18. Was client notified of all discrepancies with this order?      Yes       No       NA

Person Notified:	<input type="text"/>	Date:	<input type="text"/>
By Whom:	<input type="text"/>	Via:	<input type="checkbox"/> eMail <input type="checkbox"/> Phone <input type="checkbox"/> Fax <input type="checkbox"/> In Person
Regarding:	<input type="text"/>		
Client Instructions:	<input type="text"/>		

19. Additional remarks:

**Item Information**

Item #	Temp °C
Sample 1	1.9

\* Note: DoD/ELAP and TNI require items to be received at 4°C +/- 2°C

FL358  
 Monitoring Well

# Chain of Custody

2206458

Company: Shannon & Wilson  
 Project Number: 105474-050  
 Project Name: FWLE Groundwater Monitoring  
 Project Manager: David Baumister  
 Sampled by: MRH & JXS

Turnaround Request (in working days)  
 (Check One)  
 Same Day     1 Day  
 2 Days     3 Days  
 Standard (7 Days)  
 Short hold time (other)

Laboratory Number:

Number of Containers	NWTPH-HCID	NWTPH-GX/BTEX (802) <input type="checkbox"/> 8260 <input type="checkbox"/>	NWTPH-GX	NWTPH-Dx (Acid / SG Clean-up) <input type="checkbox"/>	Volatiles 8260	Halogenated Volatiles 8260	EDB EPA 8011 (Waters Only)	Semivolatiles 8270/SIM (with low-level PAHs)	PAHs 8270/SIM (low-level)	PCBs 8082	Organochlorine Pesticides 8081	Organophosphorus Pesticides 8270/SIM	Chlorinated Acid Herbicides 8151	Total RCRA Metals	Total MTCA Metals	TCLP Metals	HEM (oil and grease) 1664	Ferrous Iron SH3500	% Moisture
1																		X	
1																		X	

Lab ID	Sample Identification	Date		Matrix
		Sampled	Time Sampled	
	FL358-MW10-220627	6/27/22	1230	Water
	FL358-MW11-220627	↓	1435	↓

Signature	Company	Date	Time	Comments/Special Instructions
<u>m H...</u>	<u>SWI</u>	<u>6/28/22</u>	<u>0800</u>	
<u>J. Isaacson</u>	<u>ALPHA</u>	<u>6/28/22</u>	<u>0800</u>	
<u>J. Isaacson</u>	<u>ALPHA</u>	<u>6/28/22</u>	<u>0847</u>	
<u>C.</u>	<u>FAI</u>	<u>6/28/22</u>	<u>0658</u>	

Reviewed/Date: \_\_\_\_\_ Reviewed/Date: \_\_\_\_\_

Data Package: Standard  Level III  Level IV

Chromatograms with final report  Electronic Data Deliverables (EDDs)



3600 Fremont Ave. N.  
Seattle, WA 98103  
T: (206) 352-3790  
F: (206) 352-7178  
info@fremontanalytical.com

**OnSite Environmental Inc**  
David Baumeister  
14648 NE 95th Street  
Redmond, WA 98052

**RE: FL 358 Monitoring Wells**  
**Work Order Number: 2206475**

July 07, 2022

**Attention David Baumeister:**

Fremont Analytical, Inc. received 4 sample(s) on 6/29/2022 for the analyses presented in the following report.

***Ferrous Iron by SM3500-Fe B***

This report consists of the following:

- Case Narrative
- Analytical Results
- Applicable Quality Control Summary Reports
- Chain of Custody

All analyses were performed consistent with the Quality Assurance program of Fremont Analytical, Inc. Please contact the laboratory if you should have any questions about the results.

Thank you for using Fremont Analytical.

Sincerely,

Brianna Barnes  
Project Manager

*DoD-ELAP Accreditation #79636 by PJLA, ISO/IEC 17025:2017 and QSM 5.3 for Environmental Testing  
ORELAP Certification: WA 100009 (NELAP Recognized) for Environmental Testing  
Washington State Department of Ecology Accredited for Environmental Testing, Lab ID C910*

Original

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**CLIENT:** OnSite Environmental Inc  
**Project:** FL 358 Monitoring Wells  
**Work Order:** 2206475

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**Work Order Sample Summary**

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<b>Lab Sample ID</b>	<b>Client Sample ID</b>	<b>Date/Time Collected</b>	<b>Date/Time Received</b>
2206475-001	FL358-MW13-220628	06/28/2022 11:05 AM	06/29/2022 8:18 AM
2206475-002	FL358-MW8-220628	06/28/2022 12:35 PM	06/29/2022 8:18 AM
2206475-003	FL358-MW9-220628	06/28/2022 2:35 PM	06/29/2022 8:18 AM
2206475-004	FL358-MW100-220628	06/28/2022 4:00 PM	06/29/2022 8:18 AM

Note: If no "Time Collected" is supplied, a default of 12:00AM is assigned

---

**CLIENT:** OnSite Environmental Inc

**Project:** FL 358 Monitoring Wells

---

**I. SAMPLE RECEIPT:**

Samples receipt information is recorded on the attached Sample Receipt Checklist.

**II. GENERAL REPORTING COMMENTS:**

Results are reported on a wet weight basis unless dry-weight correction is denoted in the units field on the analytical report ("mg/kg-dry" or "ug/kg-dry").

Matrix Spike (MS) and MS Duplicate (MSD) samples are tested from an analytical batch of "like" matrix to check for possible matrix effect. The MS and MSD will provide site specific matrix data only for those samples which are spiked by the laboratory. The sample chosen for spike purposes may or may not have been a sample submitted in this sample delivery group. The validity of the analytical procedures for which data is reported in this analytical report is determined by the Laboratory Control Sample (LCS) and the Method Blank (MB). The LCS and the MB are processed with the samples and the MS/MSD to ensure method criteria are achieved throughout the entire analytical process.

**III. ANALYSES AND EXCEPTIONS:**

Exceptions associated with this report will be footnoted in the analytical results page(s) or the quality control summary page(s) and/or noted below.

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Qualifiers:

- \* - Flagged value is not within established control limits
- B - Analyte detected in the associated Method Blank
- D - Dilution was required
- E - Value above quantitation range
- H - Holding times for preparation or analysis exceeded
- I - Analyte with an internal standard that does not meet established acceptance criteria
- J - Analyte detected below Reporting Limit
- N - Tentatively Identified Compound (TIC)
- Q - Analyte with an initial or continuing calibration that does not meet established acceptance criteria
- S - Spike recovery outside accepted recovery limits
- ND - Not detected at the Reporting Limit
- R - High relative percent difference observed

Acronyms:

- %Rec - Percent Recovery
- CCB - Continued Calibration Blank
- CCV - Continued Calibration Verification
- DF - Dilution Factor
- DUP - Sample Duplicate
- HEM - Hexane Extractable Material
- ICV - Initial Calibration Verification
- LCS/LCSD - Laboratory Control Sample / Laboratory Control Sample Duplicate
- MCL - Maximum Contaminant Level
- MB or MBLANK - Method Blank
- MDL - Method Detection Limit
- MS/MSD - Matrix Spike / Matrix Spike Duplicate
- PDS - Post Digestion Spike
- Ref Val - Reference Value
- REP - Sample Replicate
- RL - Reporting Limit
- RPD - Relative Percent Difference
- SD - Serial Dilution
- SGT - Silica Gel Treatment
- SPK - Spike
- Surr - Surrogate



**CLIENT:** OnSite Environmental Inc  
**Project:** FL 358 Monitoring Wells

**Lab ID:** 2206475-001 **Collection Date:** 6/28/2022 11:05:00 AM  
**Client Sample ID:** FL358-MW13-220628 **Matrix:** Water

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<b><u>Ferrous Iron by SM3500-Fe B</u></b> Batch ID: R76628 Analyst: ALT						
Ferrous Iron	0.985	0.100		mg/L	1	6/29/2022 10:25:00 AM

**Lab ID:** 2206475-002 **Collection Date:** 6/28/2022 12:35:00 PM  
**Client Sample ID:** FL358-MW8-220628 **Matrix:** Water

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<b><u>Ferrous Iron by SM3500-Fe B</u></b> Batch ID: R76628 Analyst: ALT						
Ferrous Iron	0.457	0.100		mg/L	1	6/29/2022 10:25:00 AM

**Lab ID:** 2206475-003 **Collection Date:** 6/28/2022 2:35:00 PM  
**Client Sample ID:** FL358-MW9-220628 **Matrix:** Water

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<b><u>Ferrous Iron by SM3500-Fe B</u></b> Batch ID: R76628 Analyst: ALT						
Ferrous Iron	64.9	12.5	D	mg/L	125	6/29/2022 10:25:00 AM

**Lab ID:** 2206475-004 **Collection Date:** 6/28/2022 4:00:00 PM  
**Client Sample ID:** FL358-MW100-220628 **Matrix:** Water

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<b><u>Ferrous Iron by SM3500-Fe B</u></b> Batch ID: R76628 Analyst: ALT						
Ferrous Iron	69.8	12.5	D	mg/L	125	6/29/2022 10:25:00 AM

**Work Order:** 2206475  
**CLIENT:** OnSite Environmental Inc  
**Project:** FL 358 Monitoring Wells

**QC SUMMARY REPORT**  
**Ferrous Iron by SM3500-Fe B**

Sample ID: <b>MB-R76628</b>	SampType: <b>MBLK</b>	Units: <b>mg/L</b>	Prep Date: <b>6/29/2022</b>	RunNo: <b>76628</b>							
Client ID: <b>MBLKW</b>	Batch ID: <b>R76628</b>	Analysis Date: <b>6/29/2022</b>	SeqNo: <b>1572491</b>								
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Ferrous Iron ND 0.100

Sample ID: <b>LCS-R76628</b>	SampType: <b>LCS</b>	Units: <b>mg/L</b>	Prep Date: <b>6/29/2022</b>	RunNo: <b>76628</b>							
Client ID: <b>LCSW</b>	Batch ID: <b>R76628</b>	Analysis Date: <b>6/29/2022</b>	SeqNo: <b>1572492</b>								
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Ferrous Iron 0.349 0.100 0.4000 0 87.2 85 115

Sample ID: <b>2206475-004ADUP</b>	SampType: <b>DUP</b>	Units: <b>mg/L</b>	Prep Date: <b>6/29/2022</b>	RunNo: <b>76628</b>							
Client ID: <b>FL358-MW100-220628</b>	Batch ID: <b>R76628</b>	Analysis Date: <b>6/29/2022</b>	SeqNo: <b>1572498</b>								
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Ferrous Iron 74.7 12.5 69.83 6.80 20 D

Sample ID: <b>2206475-004AMS</b>	SampType: <b>MS</b>	Units: <b>mg/L</b>	Prep Date: <b>6/29/2022</b>	RunNo: <b>76628</b>							
Client ID: <b>FL358-MW100-220628</b>	Batch ID: <b>R76628</b>	Analysis Date: <b>6/29/2022</b>	SeqNo: <b>1572499</b>								
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Ferrous Iron 124 12.5 50.00 69.83 108 70 130 D

Sample ID: <b>2206475-004AMSD</b>	SampType: <b>MSD</b>	Units: <b>mg/L</b>	Prep Date: <b>6/29/2022</b>	RunNo: <b>76628</b>							
Client ID: <b>FL358-MW100-220628</b>	Batch ID: <b>R76628</b>	Analysis Date: <b>6/29/2022</b>	SeqNo: <b>1572500</b>								
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Ferrous Iron 125 12.5 50.00 69.83 110 70 130 123.9 0.659 30 D

Client Name: ONSITE	Work Order Number: 2206475
Logged by: Elisabeth Samoray	Date Received: 6/29/2022 8:18:00 AM

**Chain of Custody**

1. Is Chain of Custody complete?      Yes       No       Not Present
2. How was the sample delivered?      Courier

**Log In**

3. Coolers are present?      Yes       No       NA
4. Shipping container/cooler in good condition?      Yes       No
5. Custody Seals present on shipping container/cooler?  
(Refer to comments for Custody Seals not intact)      Yes       No       Not Present
6. Was an attempt made to cool the samples?      Yes       No       NA
7. Were all items received at a temperature of >2°C to 6°C \*      Yes       No       NA
8. Sample(s) in proper container(s)?      Yes       No
9. Sufficient sample volume for indicated test(s)?      Yes       No
10. Are samples properly preserved?      Yes       No
11. Was preservative added to bottles?      Yes       No       NA
12. Is there headspace in the VOA vials?      Yes       No       NA
13. Did all samples containers arrive in good condition(unbroken)?      Yes       No
14. Does paperwork match bottle labels?      Yes       No
15. Are matrices correctly identified on Chain of Custody?      Yes       No
16. Is it clear what analyses were requested?      Yes       No
17. Were all holding times able to be met?      Yes       No

**Special Handling (if applicable)**

18. Was client notified of all discrepancies with this order?      Yes       No       NA

Person Notified:	<input type="text"/>	Date:	<input type="text"/>
By Whom:	<input type="text"/>	Via:	<input type="checkbox"/> eMail <input type="checkbox"/> Phone <input type="checkbox"/> Fax <input type="checkbox"/> In Person
Regarding:	<input type="text"/>		
Client Instructions:	<input type="text"/>		

19. Additional remarks:

**Item Information**

Item #	Temp °C
Sample 1	3.3

\* Note: DoD/ELAP and TNI require items to be received at 4°C +/- 2°C

# Chain of Custody

Company: Shannon & Wilson  
Project Number: 105474-050  
Project Name: FL 358 Monitoring Wells  
Project Manager: David Baumeister  
Sampled by: MPH & JXS

**Turnaround Request (in working days)**

- (Check One)
- Same Day     1 Day  
 2 Days     3 Days  
 Standard (7 Days)  
 24 hr hold time (other)

**Laboratory Number:**

Number of Containers	NWTPH-HCID	NWTPH-Gx/BTEX (8021) <input type="checkbox"/> 8260 <input type="checkbox"/>	NWTPH-Gx	NWTPH-Dx (Acid / SG Clean-up) <input type="checkbox"/>	Volatiles 8260	Halogenated Volatiles 8260	EDB EPA 8011 (Waters Only)	Semivolatiles 8270/SIM (with low-level PAHs)	PAHs 8270/SIM (low-level)	PCBs 8082	Organochlorine Pesticides 8081	Organophosphorus Pesticides 8270/SIM	Chlorinated Acid Herbicides 8151	Total RCRA Metals	Total MTCA Metals	TCLP Metals	HEM (oil and grease) 1664	Ferrous Iron by SK3500	% Moisture
1																		X	
1																		X	
1																		X	
1																		X	

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix
	FL358-MW13-220628	6/29/22	1105	Water
	FL358-MW8-220628	↓	1235	↓
	FL358-MW9-220628	↓	1435	↓
	FL358-MW100-220628	↓	1600	↓

Signature	Company	Date	Time	Comments/Special Instructions
<u>[Signature]</u>	<u>SWI</u>	<u>6/29</u>	<u>0800</u>	<u>24-hr hold time</u>
<u>[Signature]</u>	<u>ALPHA</u>	<u>6/29/22</u>	<u>0805</u>	
<u>[Signature]</u>	<u>ALPHA</u>	<u>6/29/22</u>	<u>0810</u>	
<u>[Signature]</u>	<u>FAI</u>	<u>6/29</u>	<u>0818</u>	Data Package: Standard <input type="checkbox"/> Level III <input type="checkbox"/> Level IV <input type="checkbox"/>
Reviewed/Date	Reviewed/Date	Chromatograms with final report <input type="checkbox"/> Electronic Data Deliverables (EDDs) <input type="checkbox"/>		



**OnSite Environmental Inc.**

Analytical Laboratory Testing Services  
 14648 NE 95th Street • Redmond, WA 98052  
 Phone: (425) 883-3881 • www.onsite-env.com

# Chain of Custody

Company: Shannon & Wilson  
 Project Number: 105474-050  
 Project Name: FL358 Monitoring Wells  
 Project Manager: Joseph Sawberg  
 Sampled by: " "

**Turnaround Request (in working days)**

(Check One)

Same Day     1 Day  
 2 Days     3 Days  
 Standard (7 Days)  
 \_\_\_\_\_ (other)

Laboratory Number: **06-318**

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers
1	FL358-MW10-Soil IPW	6/28	1230	Soil	4
2	FL358-MW11-Soil IPW	↓	1250	↓	↓
3	FL358-MW13-Soil IPW		1350		
4	FL358-MW14-Soil IPW		1420		
5	FL358-MW8-Soil IPW		1450		
6	FL358-MW9-Soil IPW		1515		

NWTPH-HCID	NWTPH-Gx/BTEX (8021 <input type="checkbox"/> 8260 <input type="checkbox"/> )	NWTPH-Gx	NWTPH-Dx (Acid / SG Clean-up <input type="checkbox"/> )	Volatiles 8260	Halogenated Volatiles 8260	EDB EPA 8011 (Waters Only)	Semivolatiles 8270/SIM (with low-level PAHs)	PAHs 8270/SIM (low-level)	PCBs 8082	Organochlorine Pesticides 8081	Organophosphorus Pesticides 8270/SIM	Chlorinated Acid Herbicides 8151	Total PCRA Metals + <u>Cu, Ni, Pb, Zn</u>	Total MTCA Metals	TCLP Metals	HEM (oil and grease) 1664	Ferrous Iron *	% Moisture
				X									X				X	

Signature	Company	Date	Time	Comments/Special Instructions
	<u>SWI</u>	<u>6/28</u>	<u>0800</u>	<u>* Sent directly to Fremont Analytical</u>
<u>J. Isaacson</u>	<u>ALPHA</u>	<u>6/29/22</u>	<u>0805</u>	
<u>J. Isaacson</u>	<u>ALPHA</u>	<u>6/29/22</u>	<u>1230</u>	
	<u>ORC</u>	<u>6/29/22</u>	<u>1230</u>	
Data Package: Standard <input type="checkbox"/> Level III <input type="checkbox"/> Level IV <input type="checkbox"/>				Chromatograms with final report <input type="checkbox"/> Electronic Data Deliverables (EDDs) <input checked="" type="checkbox"/>



14648 NE 95<sup>th</sup> Street, Redmond, WA 98052 • (425) 883-3881

July 14, 2022

Joseph Sawdey  
Shannon & Wilson, Inc.  
400 N 34th Street, Suite 100  
Seattle, WA 98103

Re: Analytical Data for Project 105474-050  
Laboratory Reference No. 2206-339

Dear Joseph:

Enclosed are the analytical results and associated quality control data for samples submitted on June 30, 2022.

The standard policy of OnSite Environmental, Inc. is to store your samples for 30 days from the date of receipt. If you require longer storage, please contact the laboratory.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning the data, or need additional information, please feel free to call me.

Sincerely,

A handwritten signature in black ink, appearing to read "DB", with a long horizontal flourish extending to the right.

David Baumeister  
Project Manager

Enclosures



---

OnSite Environmental, Inc. 14648 NE 95<sup>th</sup> Street, Redmond, WA 98052 (425) 883-3881

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: July 14, 2022  
Samples Submitted: June 30, 2022  
Laboratory Reference: 2206-339  
Project: 105474-050

### Case Narrative

Samples were collected on June 29, 2022 and received by the laboratory on June 30, 2022. They were maintained at the laboratory at a temperature of 2°C to 6°C.

Please note that any and all soil sample results are reported on a dry-weight basis, unless otherwise noted below.

General QA/QC issues associated with the analytical data enclosed in this laboratory report will be indicated with a reference to a comment or explanation on the Data Qualifier page. More complex and involved QA/QC issues will be discussed in detail below.



Date of Report: July 14, 2022  
 Samples Submitted: June 30, 2022  
 Laboratory Reference: 2206-339  
 Project: 105474-050

### VOLATILE ORGANICS EPA 8260D

page 1 of 2

Matrix: Soil  
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>FL358-MW7-Soil IDW</b>					
Laboratory ID:	06-339-01					
Vinyl Chloride	ND	0.00090	EPA 8260D	7-5-22	7-5-22	
1,1-Dichloroethene	ND	0.00090	EPA 8260D	7-5-22	7-5-22	
(trans) 1,2-Dichloroethene	ND	0.00090	EPA 8260D	7-5-22	7-5-22	
(cis) 1,2-Dichloroethene	ND	0.00090	EPA 8260D	7-5-22	7-5-22	
Trichloroethene	ND	0.00090	EPA 8260D	7-5-22	7-5-22	
Tetrachloroethene	ND	0.00090	EPA 8260D	7-5-22	7-5-22	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>109</i>	<i>75-130</i>				
<i>Toluene-d8</i>	<i>102</i>	<i>78-128</i>				
<i>4-Bromofluorobenzene</i>	<i>101</i>	<i>71-130</i>				

<b>Client ID:</b>	<b>FL358-MW12-Soil IDW</b>					
Laboratory ID:	06-339-02					
Vinyl Chloride	ND	0.00084	EPA 8260D	7-5-22	7-5-22	
1,1-Dichloroethene	ND	0.00084	EPA 8260D	7-5-22	7-5-22	
(trans) 1,2-Dichloroethene	ND	0.00084	EPA 8260D	7-5-22	7-5-22	
(cis) 1,2-Dichloroethene	ND	0.00084	EPA 8260D	7-5-22	7-5-22	
Trichloroethene	ND	0.00084	EPA 8260D	7-5-22	7-5-22	
Tetrachloroethene	ND	0.00084	EPA 8260D	7-5-22	7-5-22	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>110</i>	<i>75-130</i>				
<i>Toluene-d8</i>	<i>103</i>	<i>78-128</i>				
<i>4-Bromofluorobenzene</i>	<i>100</i>	<i>71-130</i>				

<b>Client ID:</b>	<b>FL358-MW6-Soil IDW</b>					
Laboratory ID:	06-339-03					
Vinyl Chloride	ND	0.00082	EPA 8260D	7-5-22	7-5-22	
1,1-Dichloroethene	ND	0.00082	EPA 8260D	7-5-22	7-5-22	
(trans) 1,2-Dichloroethene	ND	0.00082	EPA 8260D	7-5-22	7-5-22	
(cis) 1,2-Dichloroethene	0.0014	0.00082	EPA 8260D	7-5-22	7-5-22	
Trichloroethene	0.0015	0.00082	EPA 8260D	7-5-22	7-5-22	
Tetrachloroethene	0.015	0.00082	EPA 8260D	7-5-22	7-5-22	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>109</i>	<i>75-130</i>				
<i>Toluene-d8</i>	<i>102</i>	<i>78-128</i>				
<i>4-Bromofluorobenzene</i>	<i>96</i>	<i>71-130</i>				



OnSite Environmental, Inc. 14648 NE 95<sup>th</sup> Street, Redmond, WA 98052 (425) 883-3881

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: July 14, 2022  
 Samples Submitted: June 30, 2022  
 Laboratory Reference: 2206-339  
 Project: 105474-050

**VOLATILE ORGANICS EPA 8260D**  
 page 2 of 2

Matrix: Soil  
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>FL358-MW5B-Soil IDW</b>					
Laboratory ID:	06-339-04					
Vinyl Chloride	ND	0.00080	EPA 8260D	7-5-22	7-5-22	
1,1-Dichloroethene	ND	0.00080	EPA 8260D	7-5-22	7-5-22	
(trans) 1,2-Dichloroethene	ND	0.00080	EPA 8260D	7-5-22	7-5-22	
(cis) 1,2-Dichloroethene	0.0018	0.00080	EPA 8260D	7-5-22	7-5-22	
Trichloroethene	0.012	0.00080	EPA 8260D	7-5-22	7-5-22	
Tetrachloroethene	0.034	0.00080	EPA 8260D	7-5-22	7-5-22	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>108</i>	<i>75-130</i>				
<i>Toluene-d8</i>	<i>101</i>	<i>78-128</i>				
<i>4-Bromofluorobenzene</i>	<i>99</i>	<i>71-130</i>				

<b>Client ID:</b>	<b>FL358-MW5A-Soil IDW</b>					
Laboratory ID:	06-339-05					
Vinyl Chloride	ND	0.043	EPA 8260D	7-5-22	7-5-22	
1,1-Dichloroethene	ND	0.043	EPA 8260D	7-5-22	7-5-22	
(trans) 1,2-Dichloroethene	ND	0.043	EPA 8260D	7-5-22	7-5-22	
(cis) 1,2-Dichloroethene	ND	0.043	EPA 8260D	7-5-22	7-5-22	
Trichloroethene	0.055	0.043	EPA 8260D	7-5-22	7-5-22	
Tetrachloroethene	4.8	0.043	EPA 8260D	7-5-22	7-5-22	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>102</i>	<i>75-130</i>				
<i>Toluene-d8</i>	<i>102</i>	<i>78-128</i>				
<i>4-Bromofluorobenzene</i>	<i>101</i>	<i>71-130</i>				



Date of Report: July 14, 2022  
 Samples Submitted: June 30, 2022  
 Laboratory Reference: 2206-339  
 Project: 105474-050

**VOLATILE ORGANICS EPA 8260D  
 QUALITY CONTROL**

Matrix: Soil  
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>METHOD BLANK</b>						
Laboratory ID:	MB0705S1					
Vinyl Chloride	ND	0.0010	EPA 8260D	7-5-22	7-5-22	
1,1-Dichloroethene	ND	0.0010	EPA 8260D	7-5-22	7-5-22	
(trans) 1,2-Dichloroethene	ND	0.0010	EPA 8260D	7-5-22	7-5-22	
(cis) 1,2-Dichloroethene	ND	0.0010	EPA 8260D	7-5-22	7-5-22	
Trichloroethene	ND	0.0010	EPA 8260D	7-5-22	7-5-22	
Tetrachloroethene	ND	0.0010	EPA 8260D	7-5-22	7-5-22	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	99	75-130				
<i>Toluene-d8</i>	100	78-128				
<i>4-Bromofluorobenzene</i>	100	71-130				

Analyte	Result		Spike Level		Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
<b>SPIKE BLANKS</b>										
Laboratory ID:	SB0705S1									
	SB	SBD	SB	SBD	SB	SBD				
1,1-Dichloroethene	<b>0.0527</b>	<b>0.0513</b>	0.0500	0.0500	105	103	75-129	3	19	
Benzene	<b>0.0515</b>	<b>0.0502</b>	0.0500	0.0500	103	100	80-122	3	18	
Trichloroethene	<b>0.0527</b>	<b>0.0518</b>	0.0500	0.0500	105	104	80-129	2	18	
Toluene	<b>0.0534</b>	<b>0.0518</b>	0.0500	0.0500	107	104	80-120	3	18	
Chlorobenzene	<b>0.0519</b>	<b>0.0520</b>	0.0500	0.0500	104	104	80-120	0	18	
<i>Surrogate:</i>										
<i>Dibromofluoromethane</i>					102	100	75-130			
<i>Toluene-d8</i>					101	101	78-128			
<i>4-Bromofluorobenzene</i>					102	103	71-130			



Date of Report: July 14, 2022  
 Samples Submitted: June 30, 2022  
 Laboratory Reference: 2206-339  
 Project: 105474-050

### VOLATILE ORGANICS EPA 8260D

Matrix: Water  
 Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>FL358-DeconH20</b>					
Laboratory ID:	06-339-06					
Vinyl Chloride	ND	0.20	EPA 8260D	7-6-22	7-6-22	
1,1-Dichloroethene	ND	0.20	EPA 8260D	7-6-22	7-6-22	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260D	7-6-22	7-6-22	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260D	7-6-22	7-6-22	
Trichloroethene	ND	0.20	EPA 8260D	7-6-22	7-6-22	
Tetrachloroethene	ND	0.20	EPA 8260D	7-6-22	7-6-22	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	98	75-127				
<i>Toluene-d8</i>	99	80-127				
<i>4-Bromofluorobenzene</i>	101	78-125				



Date of Report: July 14, 2022  
 Samples Submitted: June 30, 2022  
 Laboratory Reference: 2206-339  
 Project: 105474-050

**VOLATILE ORGANICS EPA 8260D  
 QUALITY CONTROL**

Matrix: Water  
 Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>METHOD BLANK</b>						
Laboratory ID:	MB0706W1					
Vinyl Chloride	ND	0.20	EPA 8260D	7-6-22	7-6-22	
1,1-Dichloroethene	ND	0.20	EPA 8260D	7-6-22	7-6-22	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260D	7-6-22	7-6-22	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260D	7-6-22	7-6-22	
Trichloroethene	ND	0.20	EPA 8260D	7-6-22	7-6-22	
Tetrachloroethene	ND	0.20	EPA 8260D	7-6-22	7-6-22	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	99	75-127				
<i>Toluene-d8</i>	99	80-127				
<i>4-Bromofluorobenzene</i>	99	78-125				

Analyte	Result		Spike Level		Source Result	Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
<b>MATRIX SPIKES</b>											
Laboratory ID:	06-332-02										
	MS	MSD	MS	MSD		MS	MSD				
1,1-Dichloroethene	<b>9.96</b>	<b>9.38</b>	10.0	10.0	ND	100	94	76-124	6	15	
Benzene	<b>10.5</b>	<b>9.87</b>	10.0	10.0	ND	105	99	74-122	6	16	
Trichloroethene	<b>11.3</b>	<b>10.8</b>	10.0	10.0	ND	113	108	79-129	5	17	
Toluene	<b>10.9</b>	<b>10.5</b>	10.0	10.0	ND	109	105	80-120	4	19	
Chlorobenzene	<b>11.3</b>	<b>10.8</b>	10.0	10.0	ND	113	108	78-120	5	16	
<i>Surrogate:</i>											
<i>Dibromofluoromethane</i>						101	98	75-127			
<i>Toluene-d8</i>						102	102	80-127			
<i>4-Bromofluorobenzene</i>						102	104	78-125			



Date of Report: July 14, 2022  
 Samples Submitted: June 30, 2022  
 Laboratory Reference: 2206-339  
 Project: 105474-050

**TOTAL METALS  
 EPA 6010D/7471B**

Matrix: Soil  
 Units: mg/Kg (ppm)

<b>Analyte</b>	<b>Result</b>	<b>PQL</b>	<b>Method</b>	<b>Date Prepared</b>	<b>Date Analyzed</b>	<b>Flags</b>
<b>Client ID:</b>	<b>FL358-MW7-Soil IDW</b>					
Laboratory ID:	06-339-01					
Arsenic	<b>ND</b>	11	EPA 6010D	7-11-22	7-11-22	
Barium	<b>51</b>	2.7	EPA 6010D	7-11-22	7-11-22	
Cadmium	<b>ND</b>	0.55	EPA 6010D	7-11-22	7-11-22	
Chromium	<b>21</b>	0.55	EPA 6010D	7-11-22	7-11-22	
Copper	<b>23</b>	1.1	EPA 6010D	7-12-22	7-12-22	
Lead	<b>ND</b>	5.5	EPA 6010D	7-11-22	7-11-22	
Mercury	<b>ND</b>	0.27	EPA 7471B	7-12-22	7-12-22	
Nickel	<b>22</b>	2.7	EPA 6010D	7-11-22	7-11-22	
Selenium	<b>ND</b>	11	EPA 6010D	7-11-22	7-11-22	
Silver	<b>ND</b>	1.1	EPA 6010D	7-11-22	7-11-22	
Zinc	<b>29</b>	2.7	EPA 6010D	7-11-22	7-11-22	

<b>Client ID:</b>	<b>FL358-MW12-Soil IDW</b>					
Laboratory ID:	06-339-02					
Arsenic	<b>ND</b>	11	EPA 6010D	7-11-22	7-11-22	
Barium	<b>45</b>	2.9	EPA 6010D	7-11-22	7-11-22	
Cadmium	<b>ND</b>	0.57	EPA 6010D	7-11-22	7-11-22	
Chromium	<b>20</b>	0.57	EPA 6010D	7-11-22	7-11-22	
Copper	<b>11</b>	1.1	EPA 6010D	7-12-22	7-12-22	
Lead	<b>ND</b>	5.7	EPA 6010D	7-11-22	7-11-22	
Mercury	<b>ND</b>	0.29	EPA 7471B	7-12-22	7-12-22	
Nickel	<b>21</b>	2.9	EPA 6010D	7-11-22	7-11-22	
Selenium	<b>ND</b>	11	EPA 6010D	7-11-22	7-11-22	
Silver	<b>ND</b>	1.1	EPA 6010D	7-11-22	7-11-22	
Zinc	<b>25</b>	2.9	EPA 6010D	7-11-22	7-11-22	



Date of Report: July 14, 2022  
 Samples Submitted: June 30, 2022  
 Laboratory Reference: 2206-339  
 Project: 105474-050

**TOTAL METALS  
 EPA 6010D/7471B**

Matrix: Soil  
 Units: mg/Kg (ppm)

<b>Analyte</b>	<b>Result</b>	<b>PQL</b>	<b>Method</b>	<b>Date Prepared</b>	<b>Date Analyzed</b>	<b>Flags</b>
<b>Client ID:</b>	<b>FL358-MW6-Soil IDW</b>					
Laboratory ID:	06-339-03					
Arsenic	ND	11	EPA 6010D	7-11-22	7-11-22	
Barium	45	2.9	EPA 6010D	7-11-22	7-11-22	
Cadmium	ND	0.57	EPA 6010D	7-11-22	7-11-22	
Chromium	21	0.57	EPA 6010D	7-11-22	7-11-22	
Copper	13	1.1	EPA 6010D	7-12-22	7-12-22	
Lead	ND	5.7	EPA 6010D	7-11-22	7-11-22	
Mercury	ND	0.29	EPA 7471B	7-12-22	7-12-22	
Nickel	23	2.9	EPA 6010D	7-11-22	7-11-22	
Selenium	ND	11	EPA 6010D	7-11-22	7-11-22	
Silver	ND	1.1	EPA 6010D	7-11-22	7-11-22	
Zinc	27	2.9	EPA 6010D	7-11-22	7-11-22	

<b>Client ID:</b>	<b>FL358-MW5B-Soil IDW</b>					
Laboratory ID:	06-339-04					
Arsenic	ND	11	EPA 6010D	7-11-22	7-11-22	
Barium	41	2.8	EPA 6010D	7-11-22	7-11-22	
Cadmium	ND	0.56	EPA 6010D	7-11-22	7-11-22	
Chromium	20	0.56	EPA 6010D	7-11-22	7-11-22	
Copper	11	1.1	EPA 6010D	7-12-22	7-12-22	
Lead	ND	5.6	EPA 6010D	7-11-22	7-11-22	
Mercury	ND	0.28	EPA 7471B	7-12-22	7-12-22	
Nickel	25	2.8	EPA 6010D	7-11-22	7-11-22	
Selenium	ND	11	EPA 6010D	7-11-22	7-11-22	
Silver	ND	1.1	EPA 6010D	7-11-22	7-11-22	
Zinc	26	2.8	EPA 6010D	7-11-22	7-11-22	



Date of Report: July 14, 2022  
 Samples Submitted: June 30, 2022  
 Laboratory Reference: 2206-339  
 Project: 105474-050

**TOTAL METALS  
 EPA 6010D/7471B**

Matrix: Soil  
 Units: mg/Kg (ppm)

<b>Analyte</b>	<b>Result</b>	<b>PQL</b>	<b>Method</b>	<b>Date Prepared</b>	<b>Date Analyzed</b>	<b>Flags</b>
<b>Client ID:</b>	<b>FL358-MW5A-Soil IDW</b>					
<b>Laboratory ID:</b>	06-339-05					
Arsenic	<b>ND</b>	11	EPA 6010D	7-11-22	7-11-22	
Barium	<b>46</b>	2.8	EPA 6010D	7-11-22	7-11-22	
Cadmium	<b>ND</b>	0.56	EPA 6010D	7-11-22	7-11-22	
Chromium	<b>20</b>	0.56	EPA 6010D	7-11-22	7-11-22	
Copper	<b>15</b>	1.1	EPA 6010D	7-12-22	7-12-22	
Lead	<b>ND</b>	5.6	EPA 6010D	7-11-22	7-11-22	
Mercury	<b>ND</b>	0.28	EPA 7471B	7-12-22	7-12-22	
Nickel	<b>21</b>	2.8	EPA 6010D	7-11-22	7-11-22	
Selenium	<b>ND</b>	11	EPA 6010D	7-11-22	7-11-22	
Silver	<b>ND</b>	1.1	EPA 6010D	7-11-22	7-11-22	
Zinc	<b>26</b>	2.8	EPA 6010D	7-11-22	7-11-22	



Date of Report: July 14, 2022  
 Samples Submitted: June 30, 2022  
 Laboratory Reference: 2206-339  
 Project: 105474-050

**TOTAL METALS  
 EPA 6010D/7471B  
 QUALITY CONTROL**

Matrix: Soil  
 Units: mg/Kg (ppm)

<b>Analyte</b>	<b>Result</b>	<b>PQL</b>	<b>Method</b>	<b>Date Prepared</b>	<b>Date Analyzed</b>	<b>Flags</b>
<b>METHOD BLANK</b>						
Laboratory ID:	MB0711SM1					
Arsenic	ND	10	EPA 6010D	7-11-22	7-11-22	
Barium	ND	2.5	EPA 6010D	7-11-22	7-11-22	
Cadmium	ND	0.50	EPA 6010D	7-11-22	7-11-22	
Chromium	ND	0.50	EPA 6010D	7-11-22	7-11-22	
Lead	ND	5.0	EPA 6010D	7-11-22	7-11-22	
Nickel	ND	2.5	EPA 6010D	7-11-22	7-11-22	
Selenium	ND	10	EPA 6010D	7-11-22	7-11-22	
Silver	ND	1.0	EPA 6010D	7-11-22	7-11-22	
Zinc	ND	2.5	EPA 6010D	7-11-22	7-11-22	
Laboratory ID:	MB0712S1					
Mercury	ND	0.25	EPA 7471B	7-12-22	7-12-22	
Laboratory ID:	MB0712SM1					
Copper	ND	1.0	EPA 6010D	7-12-22	7-12-22	



Date of Report: July 14, 2022  
 Samples Submitted: June 30, 2022  
 Laboratory Reference: 2206-339  
 Project: 105474-050

**TOTAL METALS  
 EPA 6010D/7471B  
 QUALITY CONTROL**

Matrix: Soil  
 Units: mg/Kg (ppm)

Analyte	Result	Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
<b>DUPLICATE</b>								
Laboratory ID:	06-339-01							
	ORIG	DUP						
Arsenic	ND	ND	NA	NA	NA	NA	20	
Barium	46.3	41.2	NA	NA	NA	12	20	
Cadmium	ND	ND	NA	NA	NA	NA	20	
Chromium	19.0	21.2	NA	NA	NA	11	20	
Lead	ND	ND	NA	NA	NA	NA	20	
Nickel	20.3	18.5	NA	NA	NA	10	20	
Selenium	ND	ND	NA	NA	NA	NA	20	
Silver	ND	ND	NA	NA	NA	NA	20	
Zinc	26.9	29.0	NA	NA	NA	8	20	

Laboratory ID:	07-001-22							
Mercury	ND	ND	NA	NA	NA	NA	20	

Laboratory ID:	06-339-01							
	ORIG	DUP						
Copper	21.0	25.0	NA	NA	NA	18	20	

**MATRIX SPIKES**

Laboratory ID:	06-339-01									
	MS	MSD	MS	MSD		MS	MSD			
Arsenic	102	102	100	100	ND	102	102	75-125	0	20
Barium	130	125	100	100	46.3	84	79	75-125	3	20
Cadmium	48.9	49.1	50.0	50.0	ND	98	98	75-125	0	20
Chromium	110	110	100	100	19.0	91	91	75-125	0	20
Lead	232	234	250	250	ND	93	94	75-125	1	20
Nickel	107	107	100	100	20.3	87	87	75-125	0	20
Selenium	94.2	94.4	100	100	ND	94	94	75-125	0	20
Silver	22.6	22.5	25.0	25.0	ND	90	90	75-125	1	20
Zinc	121	120	100	100	26.9	94	93	75-125	1	20

Laboratory ID:	07-001-22									
	MS	MSD	MS	MSD		MS	MSD			
Mercury	0.574	0.584	0.500	0.500	0.144	86	88	80-120	2	20

Laboratory ID:	06-339-01									
	MS	MSD	MS	MSD		MS	MSD			
Copper	73.6	73.2	50.0	50.0	21.0	105	104	75-125	1	20



Date of Report: July 14, 2022  
Samples Submitted: June 30, 2022  
Laboratory Reference: 2206-339  
Project: 105474-050

**% MOISTURE**

<b>Client ID</b>	<b>Lab ID</b>	<b>% Moisture</b>	<b>Date Analyzed</b>
FL358-MW7-Soil IDW	06-339-01	9	7-5-22
FL358-MW12-Soil IDW	06-339-02	13	7-5-22
FL358-MW6-Soil IDW	06-339-03	12	7-5-22
FL358-MW5B-Soil IDW	06-339-04	10	7-5-22
FL358-MW5A-Soil IDW	06-339-05	11	7-5-22





### Data Qualifiers and Abbreviations

- A - Due to a high sample concentration, the amount spiked is insufficient for meaningful MS/MSD recovery data.
  - B - The analyte indicated was also found in the blank sample.
  - C - The duplicate RPD is outside control limits due to high result variability when analyte concentrations are within five times the quantitation limit.
  - E - The value reported exceeds the quantitation range and is an estimate.
  - F - Surrogate recovery data is not available due to the high concentration of coeluting target compounds.
  - H - The analyte indicated is a common laboratory solvent and may have been introduced during sample preparation, and be impacting the sample result.
  - I - Compound recovery is outside of the control limits.
  - J - The value reported was below the practical quantitation limit. The value is an estimate.
  - K - Sample duplicate RPD is outside control limits due to sample inhomogeneity. The sample was re-extracted and re-analyzed with similar results.
  - L - The RPD is outside of the control limits.
  - M - Hydrocarbons in the gasoline range are impacting the diesel range result.
  - M1 - Hydrocarbons in the gasoline range (toluene-naphthalene) are present in the sample.
  - N - Hydrocarbons in the lube oil range are impacting the diesel range result.
  - N1 - Hydrocarbons in diesel range are impacting lube oil range results.
  - O - Hydrocarbons indicative of heavier fuels are present in the sample and are impacting the gasoline result.
  - P - The RPD of the detected concentrations between the two columns is greater than 40.
  - Q - Surrogate recovery is outside of the control limits.
  - S - Surrogate recovery data is not available due to the necessary dilution of the sample.
  - T - The sample chromatogram is not similar to a typical \_\_\_\_\_.
  - U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.
  - U1 - The practical quantitation limit is elevated due to interferences present in the sample.
  - V - Matrix Spike/Matrix Spike Duplicate recoveries are outside control limits due to matrix effects.
  - W - Matrix Spike/Matrix Spike Duplicate RPD are outside control limits due to matrix effects.
  - X - Sample extract treated with a mercury cleanup procedure.
  - X1 - Sample extract treated with a sulfuric acid/silica gel cleanup procedure.
  - X2 - Sample extract treated with a silica gel cleanup procedure.
  - Y - The calibration verification for this analyte exceeded the 20% drift specified in methods 8260 & 8270, and therefore the reported result should be considered an estimate. The overall performance of the calibration verification standard met the acceptance criteria of the method.
  - Y1 - Negative effects of the matrix from this sample on the instrument caused values for this analyte in the bracketing continuing calibration verification standard (CCVs) to be outside of 20% acceptance criteria. Because of this, quantitation limits and sample concentrations should be considered estimates.
  - Z -
- ND - Not Detected at PQL  
 PQL - Practical Quantitation Limit  
 RPD - Relative Percent Difference



# Chain of Custody

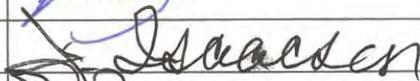
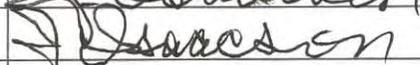
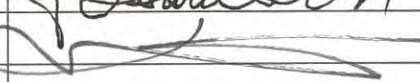
Company: SWI  
 Project Number: 105474-050  
 Project Name: FL358 Monitoring Wells  
 Project Manager: Joc Sandberg  
 Sampled by: " "

**Turnaround Request (in working days)**  
 (Check One)  
 Same Day     1 Day  
 2 Days     3 Days  
 Standard (7 Days)  
 \_\_\_\_\_ (other)

**Laboratory Number: 06-339**

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers
1	FL358-MW7-Soil IPW	6/29	1050	Soil	4
2	FL358-MW12-Soil IPW	}	1115	}	}
3	FL358-MW6-Soil IPW		1230		
4	FL358-MW5B-Soil IPW*		1300		
5	FL358-MW5A-Soil IPW**		1335		
6	FL358-Decont H <sub>2</sub> O		1410		

NWTPH-HCID	NWTPH-GX/BTEX (8021) 8260	NWTPH-GX	NWTPH-Dx (Acid / SG Clean-up)	Volatiles 8260	Halogenated Volatiles 8260	EDB EPA 8011 (Waters Only)	Semivolatiles 8270/SIM (with low-level PAHs)	PAHs 8270/SIM (low-level)	PCBs 8082	Organochlorine Pesticicides 8081	Organophosphorus Pesticicides 8270/SIM	Chlorinated Acid Herbicides 8151	Total RCRA Metals + Cu, Ni, Zn	Total MTCA Metals	TCLP Metals	HEM (oil and grease) 1664	% Moisture	
																		X

Signature	Company	Date	Time	Comments/Special Instructions
	SWI	6/30	0800	Soil target = 0.001 mg/kg
	ALPHA	6/30/22	0940	H <sub>2</sub> O target = 0.2 mg/l
	ALPHA	6/30/22	1140	HUCs = PCE, TCE, cis-trans-1,2-DCE, 1,1-DCE, VC
	OSB	6/30/22	1140	* = PID over diam = 17ppm ** = " " " = 411ppm
				Data Package: Standard <input checked="" type="checkbox"/> Level III <input type="checkbox"/> Level IV <input type="checkbox"/>
				Chromatograms with final report <input type="checkbox"/> Electronic Data Deliverables (EDDs) <input checked="" type="checkbox"/>

**Am Test Inc.**  
 13600 NE 126TH PL  
 Suite C  
 Kirkland, WA 98034  
 (425) 885-1664

*Professional  
 Analytical  
 Services*

Sep 14 2022  
 Shannon & Wilson  
 400 n. 34th St  
 Suite 100  
 Seattle, WA 98103  
 Attention: JOSEPH SAWDERY

Dear JOSEPH SAWDERY:

Enclosed please find the analytical data for your FL358 MWS project.

The following is a cross correlation of client and laboratory identifications for your convenience.

CLIENT ID	MATRIX	AMTEST ID	TEST
FL358-MW6-18-19	Soil	22-A010833	Grain Size, HOLD, CONV, DEM, BD
FL358-MW6-28-29	Soil	22-A010834	Grain Size, HOLD, CONV, DEM, BD
FL358-MW6-37-38	Soil	22-A010835	Grain Size, HOLD, CONV, DEM, BD
FL358-MW5-26-27	Soil	22-A010836	Grain Size, HOLD, CONV, DEM, BD
FL358-MW5-34-35	Soil	22-A010837	Grain Size, HOLD, CONV, DEM, BD
FL358-MW5-36-37	Soil	22-A010838	Grain Size, HOLD, CONV, DEM, BD

Your samples were received on Monday, June 27, 2022. At the time of receipt, the samples were logged in and properly maintained prior to the subsequent analysis.

The analytical procedures used at AmTest are well documented and are typically derived from the protocols of the EPA, USDA, FDA or the Army Corps of Engineers.

Following the analytical data you will find the Quality Control (QC) results.

Please note that the detection limits that are listed in the body of the report refer to the Practical Quantitation Limits (PQL's), as opposed to the Method Detection Limits (MDL's).

If you should have any questions pertaining to the data package, please feel free to contact me.

Sincerely,

  
 Aaron W. Young  
 Vice President

Project #: 105474-050  
 PO Number: 105474-050

BACT = Bacteriological  
 CONV = Conventional

MET = Metals  
 ORG = Organics

NUT=Nutrients  
 DEM=Demand

MIN=Minerals

## ANALYSIS REPORT

Shannon & Wilson  
 400 n. 34th St  
 Seattle, WA 98103  
 Attention: JOSEPH SAWDERY  
 Project Name: FL358 MWS  
 Project #: 105474-050  
 PO Number: 105474-050  
 All results reported on a dry weight basis.

Date Received: 06/27/22  
 Date Reported: 9/14/22

AMTEST Identification Number      22-A010833  
 Client Identification                 FL358-MW6-18-19  
 Sampling Date                            06/21/22, 09:20

### Conventionals

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
pH	7.7	unit		1	SW-846 9045D	KF	08/12/22
Total Solids	90.9	%		0.1	SM 2540G	SF	06/28/22
Bulk Density	1.736	g/cm3			SM 2710	AY	09/14/22

### Demand

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
Total Organic Carbon	0.13	%		0.05	SW 846 9060	NNL	08/31/22

### Grain Size Distribution

PHI	OPENING (mm)	% RETENTION	FRACTION	PERCENT	METHOD	ANALYST	DATE
-2.25	4.75	13.8 %	GRAVEL	18.1	ASTM D422	SF	07/19/22
- 2	4.00	0.70 %			ASTM D422	SF	07/19/22
-1	2.00	3.60 %			ASTM D422	SF	07/19/22
0	1.00	6.40 %	SAND	61.9	ASTM D422	SF	07/19/22
+1	0.50	17.5 %			ASTM D422	SF	07/19/22
+ 2	0.25	29.6 %			ASTM D422	SF	07/19/22
+ 3	0.125	6.40 %			ASTM D422	SF	07/19/22
+ 4	0.063	2.00 %			ASTM D422	SF	07/19/22
+ 5	0.032	0.40 %	SILT	10.7	ASTM D422	SF	07/19/22
+ 6	0.016	3.80 %			ASTM D422	SF	07/19/22
+ 7	0.008	3.70 %			ASTM D422	SF	07/19/22
+ 8	0.004	2.80 %			ASTM D422	SF	07/19/22
+ 9	0.002	2.00 %	CLAY	9.40	ASTM D422	SF	07/19/22
+ 10	0.001	1.20 %			ASTM D422	SF	07/19/22
> + 10	< 0.001	6.20 %			ASTM D422	SF	07/19/22

Am Test Inc.  
 13600 NE 126TH PL  
 Suite C  
 Kirkland, WA 98034  
 (425) 885-1664  
 www.amtestlab.com



Professional  
 Analytical  
 Services

## ANALYSIS REPORT

Shannon & Wilson  
 400 n. 34th St  
 Seattle, WA 98103  
 Attention: JOSEPH SAWDERY  
 Project Name: FL358 MWS  
 Project #: 105474-050  
 PO Number: 105474-050  
 All results reported on a dry weight basis.

Date Received: 06/27/22  
 Date Reported: 9/14/22

AMTEST Identification Number      22-A010834  
 Client Identification                 FL358-MW6-28-29  
 Sampling Date                            06/21/22, 10:15

### Conventionals

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
pH	7.7	unit		1	SW-846 9045D	KF	08/12/22
Total Solids	92.2	%		0.1	SM 2540G	SF	06/28/22
Bulk Density	1.942	g/cm3			SM 2710	AY	09/14/22

### Demand

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
Total Organic Carbon	0.09	%		0.05	SW 846 9060	NNL	08/31/22

### Grain Size Distribution

PHI	OPENING (mm)	% RETENTION	FRACTION	PERCENT	METHOD	ANALYST	DATE
-2.25	4.75	33.0 %	GRAVEL	40.6	ASTM D422	SF	07/19/22
- 2	4.00	2.20 %			ASTM D422	SF	07/19/22
-1	2.00	5.40 %			ASTM D422	SF	07/19/22
0	1.00	5.00 %	SAND	32.3	ASTM D422	SF	07/19/22
+1	0.50	5.80 %			ASTM D422	SF	07/19/22
+ 2	0.25	9.60 %			ASTM D422	SF	07/19/22
+ 3	0.125	6.90 %			ASTM D422	SF	07/19/22
+ 4	0.063	5.00 %			ASTM D422	SF	07/19/22
+ 5	0.032	0.40 %	SILT	18.8	ASTM D422	SF	07/19/22
+ 6	0.016	6.30 %			ASTM D422	SF	07/19/22
+ 7	0.008	6.60 %			ASTM D422	SF	07/19/22
+ 8	0.004	5.50 %			ASTM D422	SF	07/19/22
+ 9	0.002	2.70 %	CLAY	8.40	ASTM D422	SF	07/19/22
+ 10	0.001	1.20 %			ASTM D422	SF	07/19/22
> + 10	< 0.001	4.50 %			ASTM D422	SF	07/19/22

## ANALYSIS REPORT

Shannon & Wilson  
 400 n. 34th St  
 Seattle, WA 98103  
 Attention: JOSEPH SAWDERY  
 Project Name: FL358 MWS  
 Project #: 105474-050  
 PO Number: 105474-050  
 All results reported on a dry weight basis.

Date Received: 06/27/22  
 Date Reported: 9/14/22

AMTEST Identification Number      22-A010835  
 Client Identification                 FL358-MW6-37-38  
 Sampling Date                            06/21/22, 11:30

### Conventionals

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
pH	7.7	unit		1	SW-846 9045D	KF	08/12/22
Total Solids	88.0	%		0.1	SM 2540G	SF	06/28/22
Bulk Density	1.294	g/cm3			SM 2710	AY	09/14/22

### Demand

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
Total Organic Carbon	0.30	%		0.05	SW 846 9060	NNL	08/31/22

### Grain Size Distribution

PHI	OPENING (mm)	% RETENTION	FRACTION	PERCENT	METHOD	ANALYST	DATE
-2.25	4.75	2.20 %	GRAVEL	3.10	ASTM D422	SF	07/19/22
- 2	4.00	0.40 %			ASTM D422	SF	07/19/22
-1	2.00	0.50 %			ASTM D422	SF	07/19/22
0	1.00	0.80 %	SAND	12.1	ASTM D422	SF	07/19/22
+1	0.50	1.10 %			ASTM D422	SF	07/19/22
+ 2	0.25	2.30 %			ASTM D422	SF	07/19/22
+ 3	0.125	2.50 %			ASTM D422	SF	07/19/22
+ 4	0.063	5.40 %			ASTM D422	SF	07/19/22
+ 5	0.032	8.40 %	SILT	57.7	ASTM D422	SF	07/19/22
+ 6	0.016	19.1 %			ASTM D422	SF	07/19/22
+ 7	0.008	16.3 %			ASTM D422	SF	07/19/22
+ 8	0.004	13.9 %			ASTM D422	SF	07/19/22
+ 9	0.002	10.8 %	CLAY	27.1	ASTM D422	SF	07/19/22
+ 10	0.001	6.80 %			ASTM D422	SF	07/19/22
> + 10	< 0.001	9.50 %			ASTM D422	SF	07/19/22

## ANALYSIS REPORT

Shannon & Wilson  
 400 n. 34th St  
 Seattle, WA 98103  
 Attention: JOSEPH SAWDERY  
 Project Name: FL358 MWS  
 Project #: 105474-050  
 PO Number: 105474-050  
 All results reported on a dry weight basis.

Date Received: 06/27/22  
 Date Reported: 9/14/22

AMTEST Identification Number      22-A010836  
 Client Identification                 FL358-MW5-26-27  
 Sampling Date                            06/21/22, 15:30

### Conventionals

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
pH	7.9	unit		1	SW-846 9045D	KF	08/12/22
Total Solids	89.2	%		0.1	SM 2540G	SF	06/28/22
Bulk Density	1.835	g/cm3			SM 2710	AY	09/14/22

### Demand

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
Total Organic Carbon	0.09	%		0.05	SW 846 9060	NNL	08/31/22

### Grain Size Distribution

PHI	OPENING (mm)	% RETENTION	FRACTION	PERCENT	METHOD	ANALYST	DATE
-2.25	4.75	22.1 %	GRAVEL	27.4	ASTM D422	SF	07/19/22
- 2	4.00	1.40 %			ASTM D422	SF	07/19/22
-1	2.00	3.90 %			ASTM D422	SF	07/19/22
0	1.00	3.50 %	SAND	28.7	ASTM D422	SF	07/19/22
+1	0.50	5.00 %			ASTM D422	SF	07/19/22
+ 2	0.25	10.2 %			ASTM D422	SF	07/19/22
+ 3	0.125	6.40 %			ASTM D422	SF	07/19/22
+ 4	0.063	3.60 %			ASTM D422	SF	07/19/22
+ 5	0.032	0.30 %	SILT	27.1	ASTM D422	SF	07/19/22
+ 6	0.016	9.80 %			ASTM D422	SF	07/19/22
+ 7	0.008	8.60 %			ASTM D422	SF	07/19/22
+ 8	0.004	8.40 %			ASTM D422	SF	07/19/22
+ 9	0.002	5.70 %	CLAY	16.8	ASTM D422	SF	07/19/22
+ 10	0.001	3.10 %			ASTM D422	SF	07/19/22
> + 10	< 0.001	8.00 %			ASTM D422	SF	07/19/22

## ANALYSIS REPORT

Shannon & Wilson  
 400 n. 34th St  
 Seattle, WA 98103  
 Attention: JOSEPH SAWDERY  
 Project Name: FL358 MWS  
 Project #: 105474-050  
 PO Number: 105474-050  
 All results reported on a dry weight basis.

Date Received: 06/27/22  
 Date Reported: 9/14/22

AMTEST Identification Number      22-A010837  
 Client Identification                 FL358-MW5-34-35  
 Sampling Date                            06/21/22, 16:45

### Conventionals

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
pH	7.3	unit		1	SW-846 9045D	KF	08/12/22
Total Solids	81.6	%		0.1	SM 2540G	SF	06/28/22
Bulk Density	1.613	g/cm3			SM 2710	AY	09/14/22

### Demand

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
Total Organic Carbon	0.17	%		0.05	SW 846 9060	NNL	08/31/22

### Grain Size Distribution

PHI	OPENING (mm)	% RETENTION	FRACTION	PERCENT	METHOD	ANALYST	DATE
-2.25	4.75	10.2 %	GRAVEL	11.5	ASTM D422	SF	07/19/22
- 2	4.00	0.10 %			ASTM D422	SF	07/19/22
-1	2.00	1.20 %			ASTM D422	SF	07/19/22
0	1.00	1.60 %	SAND	34.7	ASTM D422	SF	07/19/22
+1	0.50	2.60 %			ASTM D422	SF	07/19/22
+ 2	0.25	6.30 %			ASTM D422	SF	07/19/22
+ 3	0.125	10.8 %			ASTM D422	SF	07/19/22
+ 4	0.063	13.4 %			ASTM D422	SF	07/19/22
+ 5	0.032	4.50 %	SILT	44.0	ASTM D422	SF	07/19/22
+ 6	0.016	20.4 %			ASTM D422	SF	07/19/22
+ 7	0.008	12.1 %			ASTM D422	SF	07/19/22
+ 8	0.004	7.00 %			ASTM D422	SF	07/19/22
+ 9	0.002	4.80 %	CLAY	10.0	ASTM D422	SF	07/19/22
+ 10	0.001	2.30 %			ASTM D422	SF	07/19/22
> + 10	< 0.001	2.90 %			ASTM D422	SF	07/19/22

## ANALYSIS REPORT

Shannon & Wilson  
 400 n. 34th St  
 Seattle, WA 98103  
 Attention: JOSEPH SAWDERY  
 Project Name: FL358 MWS  
 Project #: 105474-050  
 PO Number: 105474-050  
 All results reported on a dry weight basis.

Date Received: 06/27/22  
 Date Reported: 9/14/22

AMTEST Identification Number      22-A010838  
 Client Identification                 FL358-MW5-36-37  
 Sampling Date                            06/21/22, 17:00

### Conventionals

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
pH	7.8	unit		1	SW-846 9045D	KF	08/12/22
Total Solids	94.4	%		0.1	SM 2540G	SF	06/28/22
Bulk Density	1.576	g/cm3			SM 2710	AY	09/14/22

### Demand

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
Total Organic Carbon	< 0.05	%		0.05	SW 846 9060	NNL	08/31/22

### Grain Size Distribution

PHI	OPENING (mm)	% RETENTION	FRACTION	PERCENT	METHOD	ANALYST	DATE
-2.25	4.75	26.9 %	GRAVEL	34.6	ASTM D422	SF	07/19/22
- 2	4.00	2.00 %			ASTM D422	SF	07/19/22
-1	2.00	5.70 %			ASTM D422	SF	07/19/22
0	1.00	4.90 %	SAND	33.7	ASTM D422	SF	07/19/22
+1	0.50	5.80 %			ASTM D422	SF	07/19/22
+ 2	0.25	10.5 %			ASTM D422	SF	07/19/22
+ 3	0.125	6.30 %			ASTM D422	SF	07/19/22
+ 4	0.063	6.20 %			ASTM D422	SF	07/19/22
+ 5	0.032	4.10 %	SILT	22.7	ASTM D422	SF	07/19/22
+ 6	0.016	6.30 %			ASTM D422	SF	07/19/22
+ 7	0.008	7.30 %			ASTM D422	SF	07/19/22
+ 8	0.004	5.00 %			ASTM D422	SF	07/19/22
+ 9	0.002	3.50 %	CLAY	9.10	ASTM D422	SF	07/19/22
+ 10	0.001	2.00 %			ASTM D422	SF	07/19/22
> + 10	< 0.001	3.60 %			ASTM D422	SF	07/19/22

Shannon & Wilson  
Project Name: FL358 MWS  
AmTest ID: 22-A010838

**Miscellaneous**

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANLST	DATE
Hold	HOLD					AY	06/29/22

  
Aaron W. Young  
Vice President

**QC Summary for sample numbers: 22-A010833 to 22-A010838**

**DUPLICATES**

SAMPLE #	ANALYTE	UNITS	SAMPLE VALUE	DUP VALUE	RPD
22-A010833	pH	unit	7.7	7.7	0.00
22-A010836	Total Organic Carbon	%	0.09	0.08	12.
22-A010838	Total Solids	%	94.4	94.3	0.11
22-A010838	Total Solids	%	94.4	94.4	0.00
22-A010838	Gravel	%	34.6	36.6	5.6
22-A010838	Gravel	%	34.6	29.1	17.
22-A010838	Sand	%	33.7	30.5	10.
22-A010838	Sand	%	33.7	36.1	6.9
22-A010838	Silt	%	22.7	23.3	2.6
22-A010838	Silt	%	22.7	23.9	5.2
22-A010838	Clay	%	9.10	9.80	7.4
22-A010838	Clay	%	9.10	10.8	17.

**STANDARD REFERENCE MATERIALS**

ANALYTE	UNITS	TRUE VALUE	MEASURED VALUE	RECOVERY
pH	unit	6.9	6.9	100. %
pH	unit	6.9	6.9	100. %
Total Organic Carbon	%	47.	48.	102. %

**BLANKS**

ANALYTE	UNITS	RESULT
Total Organic Carbon	%	< 0.05

Client Name & Address: Shannon P Wilson 400 N 34 <sup>th</sup> ST Suite 100 Seattle, WA 98103		Invoice To: ← Same	
Contact Person: Joseph Sawdey		Invoice Contact:	
Phone No: 206-695-6907		PO Number: 105474-050	
Fax No:		Invoice Ph/Fax:	
E-mail: joseph.sawdey@shawil.com		Invoice E-mail:	
Report Delivery: (Choose all that apply) Mail / Fax / <input checked="" type="checkbox"/> Email / <input type="checkbox"/> Posted Online		Data posted to online account: YES / NO	
		Web Login ID:	

Special Instructions: Hold all additional sample material. Return to client after testing

Requested TAT: (Rush must be pre-approved by lab)  
 Standard RUSH ( 5 Day / 3 Day / 48 HR / 24 HR )  
 Temperature upon Receipt: 7.00C

Project Name: FL358 MW's		Date Sampled	Time Sampled	Matrix	No. of containers	Analysis Requested				QA/QC	
Project Number: 105474-050	AmTest ID					Client ID (35 characters max)	Toc <sup>1</sup>	PH <sup>2</sup>	Grain Size <sup>3</sup>		Density <sup>4</sup>
	10833	FL358-MW6-18-19	6/21	0920	Soil	1	X	X	X	X	
	10834	FL358-MW6-28-29	↓	1015	↓	↓	↓	↓	↓		
	10835	FL358-MW6-37-38	↓	1130	↓	↓	↓	↓	↓		
	10836	FL358-MW5-26-27	↓	1530	↓	↓	↓	↓	↓		
	10837	FL358-MW5-34-35	↓	1645	↓	↓	↓	↓	↓		
	10838	FL358-MW5-36-37	↓	1700	↓	↓	↓	↓	↓		

Collected/Relinquished By: [Signature]	Date: 6/27/22	Time: 1520	Received By: [Signature]	Date: 6/27/22	Time: 1520
Relinquished By: [Signature]	Date: 6/27/22	Time: 1622	Received By: [Signature]	Date: 6/27/22	Time: 4:22pm
Relinquished By:	Date:	Time:	Received By:	Date:	Time:

COMMENTS:

1. Toc by SM 9060
2. PH by EPA Method 9045D
3. GS by ASTM D421/D422

4. Density by SM 2710
- \*\* Retain all additional sample volume for additional analyses

Appendix E

# Investigation-Derived Waste Manifests

APPENDIX E: INVESTIGATION-DERIVED WASTE MANIFESTS

<b>UNIFORM HAZARDOUS WASTE MANIFEST</b>		1. Generator ID Number <i>VA4D930993064</i>	2. Page 1 of <i>1</i>	3. Emergency Response Phone <i>800-337-7435</i>	4. Manifest Tracking Number <b>023708687 JJK</b>				
5. Generator's Name and Mailing Address <i>Sound Transit-Link Extension Project 401 South Jackson Street Seattle, WA 98104</i>			Generator's Site Address (if different than mailing address) <i>Sound Transit-Link Extension Project 2719 S 320th St Federal Way, WA 98003</i>						
Generator's Phone: <i>206-465-1500</i>					U.S. EPA ID Number <i>VA4D930917217</i>				
6. Transporter 1 Company Name <i>CPI Environmental Inc.</i>					U.S. EPA ID Number <i>OR0089452353</i>				
7. Transporter 2 Company Name <i>Chemical Waste Management</i>					U.S. EPA ID Number <i>OR0089452353</i>				
8. Designated Facility Name and Site Address <i>CHEMICAL WASTE MANAGEMENT INC 17529 CEDAR SPRINGS LANE ARLINGTON OR 97112</i>			U.S. EPA ID Number <i>OR0089452353</i>						
Facility's Phone: <i>503-464-7643</i>									
GENERATOR	9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers		11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes		
			No.	Type					
	<i>X</i>	<i>HA3077 Hazardous waste, solid, n.o.s. (Tetrahydrofuran)</i>	<i>01</i>	<i>DM</i>	<i>800</i>	<i>P</i>	<i>F002</i>		
	<i>X</i>	<i>HA3077 Hazardous waste, solid, n.o.s. (Tetrahydrofuran)</i>	<i>04</i>	<i>DM</i>	<i>3200</i>	<i>P</i>	<i>F002</i>		
	<i>X</i>	<i>HA3072 Hazardous waste, liquid, n.o.s. (Tetrahydrofuran)</i>	<i>11</i>	<i>DM</i>	<i>3900</i>	<i>P</i>	<i>F002</i>		
14. Special Handling Instructions and Additional Information <i>HAZARDOUS WASTE</i>									
15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent. I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.									
Generator's/Offeror's Printed/Typed Name <i>Sound Transit</i>			Signature <i>[Signature]</i>			Month <i>7</i>	Day <i>7</i>	Year <i>15</i>	
INT'L	16. International Shipments <input type="checkbox"/> Import to U.S. <input type="checkbox"/> Export from U.S.		Port of entry/exit:		Date leaving U.S.:				
	Transporter signature (for exports only):								
TRANSPORTER	17. Transporter Acknowledgment of Receipt of Materials								
	Transporter 1 Printed/Typed Name <i>Jake Heatherly</i>			Signature <i>[Signature]</i>			Month <i>07</i>	Day <i>07</i>	Year <i>22</i>
	Transporter 2 Printed/Typed Name <i>[Signature]</i>			Signature <i>[Signature]</i>			Month <i>7</i>	Day <i>9</i>	Year <i>22</i>
DESIGNATED FACILITY	18. Discrepancy								
	18a. Discrepancy Indication Space <input type="checkbox"/> Quantity <input type="checkbox"/> Type <input type="checkbox"/> Residue <input type="checkbox"/> Partial Rejection <input type="checkbox"/> Full Rejection								
	Manifest Reference Number:								
	18b. Alternate Facility (or Generator)			U.S. EPA ID Number					
	Facility's Phone:								
18c. Signature of Alternate Facility (or Generator)						Month	Day	Year	
19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)									
1.		2.		3.		4.			
20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a									
Printed/Typed Name			Signature			Month	Day	Year	

**NON-HAZARDOUS WASTE MANIFEST**

1. Generator ID Number

None Required

2. Page 1 of 1

3. Emergency Response Phone

(800) 312 7455

4. Waste Tracking Number

ST-IDW-9722-01

5. Generator's Name and Mailing Address

Sound Transit  
401 S Jackson St  
Seattle, WA 98104

Generator's Site Address (if different than mailing address)

Sound Transit - Federal Way Link Exit  
3110 S 300th St  
Federal Way, WA 98003

Generator's Phone:

None

6. Transporter 1 Company Name

EH Environmental, Inc.

U.S. EPA ID Number

WAH000017217

7. Transporter 2 Company Name

U.S. EPA ID Number

8. Designated Facility Name and Site Address

América  
5400 W Marginal Way SW  
Seattle, WA 98106  
(206) 983 5618

U.S. EPA ID Number

NA

Facility's Phone:

9. Waste Shipping Name and Description

10. Containers

11. Total Quantity

12. Unit Wt./Vol.

No.

Type

1. Material Not Regulated by DDT (non-regulated IDW soil)

15

DM

1200

P

2. Material Not Regulated by DDT (non-regulated IDW water)

02

DM

800

P

3.

4.

13. Special Handling Instructions and Additional Information

1) DH-SW-ST-IDW SOIL  
2) DH-SW-ST-IDW WATER

14. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations.

Generator's/Offoror's Printed/Typed Name

Signature

Month Day Year

XKass Srinivasan

XKass Srinivasan

X 07 02

INT'L

15. International Shipments  Import to U.S.

Export from U.S.

Port of entry/exit:

Transporter Signature (for exports only):

Date leaving U.S.:

TRANSPORTER

16. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name

Signature

Month Day Year

Jake Heatherly

Jake Heatherly

09 07 22

Transporter 2 Printed/Typed Name

Signature

Month Day Year

DESIGNATED FACILITY

17. Discrepancy

17a. Discrepancy Indication Space  Quantity

Type

Residue

Partial Rejection

Full Rejection

Manifest Reference Number:

U.S. EPA ID Number

17b. Alternate Facility (or Generator)

Facility's Phone:

17c. Signature of Alternate Facility (or Generator)

Month Day Year

18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in Item 17a

Printed/Typed Name

Signature

Month Day Year

James Carvel 9/7

JM Carvel 9-7

9 7

Appendix F

# Laboratory Validation Reports

APPENDIX F: LABORATORY VALIDATION REPORTS

**Laboratory Data Review Checklist**

Completed By:

Justin Risley, EIT

Title:

Engineering Staff

Date:

August 16, 2022

Consultant Firm:

Shannon & Wilson, Inc.

Laboratory Name:

OnSite Environmental, Inc.

Laboratory Report Number:

2206-157R

Laboratory Report Date:

June 24, 2022

CS Site Name:

FL358

Laboratory Report Date:

**Note: Any N/A or No box checked must have an explanation in the comments box.**

1. Laboratory

a. Did an approved laboratory receive and perform all the submitted sample analyses?

Yes  No  N/A  Comments:

b. If the samples were transferred to another “network” laboratory or sub-contracted to an alternate laboratory, was the laboratory performing the analyses also approved?

Yes  No  N/A  Comments:

The samples were not transferred to another laboratory.

2. Chain of Custody (CoC)

a. CoC information completed, signed, and dated (including released/received by)?

Yes  No  N/A  Comments:

b. Correct analyses requested?

Yes  No  N/A  Comments:

3. Laboratory Sample Receipt Documentation

a. Sample/cooler temperature documented and within range at receipt (0° to 6° C)?

Yes  No  N/A  Comments:

b. Sample preservation acceptable – acidified waters, Methanol preserved VOC soil (GRO, BTEX, Volatile Chlorinated Solvents, etc.)?

Yes  No  N/A  Comments:

c. Sample condition documented – broken, leaking (Methanol), zero headspace (VOC vials)?

Yes  No  N/A  Comments:

The sample receipt form noted the samples arrived in good condition.

Laboratory Report Date:

- d. If there were any discrepancies, were they documented? For example, incorrect sample containers/preservation, sample temperature outside of acceptable range, insufficient or missing samples, etc.?

Yes  No  N/A  Comments:

No discrepancies were noted.

- e. Data quality or usability affected?

Comments:

The laboratories do not state an effect on the data quality or usability; please see the following sections for our assessment.

#### 4. Case Narrative

- a. Present and understandable?

Yes  No  N/A  Comments:

- b. Discrepancies, errors, or QC failures identified by the lab?

Yes  No  N/A  Comments:

The lab did not note any discrepancies, errors, or QC failures.

- c. Were all corrective actions documented?

Yes  No  N/A  Comments:

See above.

- d. What is the effect on data quality/usability according to the case narrative?

Comments:

The laboratories do not state an effect on the data quality or usability; please see the following sections for our assessment.

#### 5. Samples Results

- a. Correct analyses performed/reported as requested on COC?

Yes  No  N/A  Comments:

- b. All applicable holding times met?

Yes  No  N/A  Comments:

Laboratory Report Date:

c. All soils reported on a dry weight basis?

Yes  No  N/A  Comments:

d. Are the reported LOQs less than the Cleanup Level or the minimum required detection level for the project?

Yes  No  N/A  Comments:

e. Data quality or usability affected?

Data quality or usability are not affected.

6. QC Samples

a. Method Blank

i. One method blank reported per matrix, analysis and 20 samples?

Yes  No  N/A  Comments:

ii. All method blank results less than limit of quantitation (LOQ) or project specified objectives?

Yes  No  N/A  Comments:

iii. If above LOQ or project specified objectives, what samples are affected?

Comments:

None.

iv. Do the affected sample(s) have data flags? If so, are the data flags clearly defined?

Yes  No  N/A  Comments:

See above.

v. Data quality or usability affected?

Comments:

Data quality and usability are not affected.

Laboratory Report Date:

## b. Laboratory Control Sample/Duplicate (LCS/LCSD)

- i. Organics – One LCS/LCSD reported per matrix, analysis and 20 samples?

Yes  No  N/A  Comments:

A spike blank and spike blank duplicate were reported for water analysis of volatile organics by EPA 8260D.

- ii. Metals/Inorganics – one LCS and one sample duplicate reported per matrix, analysis and 20 samples?

Yes  No  N/A  Comments:

Metals/Inorganics were not analyzed with this work order.

- iii. Accuracy – All percent recoveries (%R) reported and within method or laboratory limits and project specified objectives, if applicable?

Yes  No  N/A  Comments:

- iv. Precision – All relative percent differences (RPD) reported and less than method or laboratory limits and project specified objectives, if applicable? RPD reported from LCS/LCSD, and or sample/sample duplicate.

Yes  No  N/A  Comments:

- v. If %R or RPD is outside of acceptable limits, what samples are affected?

Comments:

N/A; see above.

- vi. Do the affected sample(s) have data flags? If so, are the data flags clearly defined?

Yes  No  N/A  Comments:

See above.

- vii. Data quality or usability affected? (Use comment box to explain.)

Comments:

Data quality and usability are not affected; see above.

## c. Matrix Spike/Matrix Spike Duplicate (MS/MSD)

**Note: Leave blank if not required for project**

- i. Organics – One MS/MSD reported per matrix, analysis and 20 samples?

Yes  No  N/A  Comments:

The laboratory reported an MS/MSD for volatile organics by method EPA 8260D in soil.

Laboratory Report Date:

ii. Metals/Inorganics – one MS and one MSD reported per matrix, analysis and 20 samples?

Yes  No  N/A  Comments:

Metals/Inorganics were not analyzed with this work order.

iii. Accuracy – All percent recoveries (%R) reported and within method or laboratory limits and project specified objectives, if applicable?

Yes  No  N/A  Comments:

iv. Precision – All relative percent differences (RPD) reported and less than method or laboratory limits and project specified objectives, if applicable? RPD reported from MS/MSD, and or sample/sample duplicate.

Yes  No  N/A  Comments:

v. If %R or RPD is outside of acceptable limits, what samples are affected?

Comments:

N/A; see above.

vi. Do the affected sample(s) have data flags? If so, are the data flags clearly defined?

Yes  No  N/A  Comments:

See above.

vii. Data quality or usability affected? (Use comment box to explain.)

Comments:

The data quality and usability were not affected; see above.

d. Surrogates – Organics Only or Isotope Dilution Analytes (IDA) – Isotope Dilution Methods Only

i. Are surrogate/IDA recoveries reported for organic analyses – field, QC and laboratory samples?

Yes  No  N/A  Comments:

ii. Accuracy – All percent recoveries (%R) reported and within method or laboratory limits and project specified objectives, if applicable?

Yes  No  N/A  Comments:

Laboratory Report Date:

iii. Do the sample results with failed surrogate/IDA recoveries have data flags? If so, are the data flags clearly defined?

Yes  No  N/A  Comments:

There were no surrogate recovery or IDA failures associated with this work order.

iv. Data quality or usability affected?

Comments:

The data quality and usability were not affected; see above.

e. Trip Blanks

i. One trip blank reported per matrix, analysis and for each cooler containing volatile samples? (If not, enter explanation below.)

Yes  No  N/A  Comments:

ii. Is the cooler used to transport the trip blank and VOA samples clearly indicated on the COC? (If not, a comment explaining why must be entered below)

Yes  No  N/A  Comments:

Only one cooler was used to transport samples.

iii. All results less than LOQ and project specified objectives?

Yes  No  N/A  Comments:

iv. If above LOQ or project specified objectives, what samples are affected?

Comments:

See above.

v. Data quality or usability affected?

Comments:

The data quality and usability were not affected.

f. Field Duplicate

i. One field duplicate submitted per matrix, analysis and 10 project samples?

Yes  No  N/A  Comments:

A field duplicate was not submitted with this work order.

ii. Submitted blind to lab?

Yes  No  N/A  Comments:

Laboratory Report Date:

- iii. Precision – All relative percent differences (RPD) less than specified project objectives?  
(Recommended: 30% water, 50% soil)

$$\text{RPD (\%)} = \text{Absolute value of: } \frac{(R_1 - R_2)}{((R_1 + R_2)/2)} \times 100$$

Where  $R_1$  = Sample Concentration  
 $R_2$  = Field Duplicate Concentration

Yes  No  N/A  Comments:

- iv. Data quality or usability affected? (Use the comment box to explain why or why not.)

Comments:

N/A; see above.

- g. Decontamination or Equipment Blank (If not applicable, a comment stating why must be entered below)?

Yes  No  N/A  Comments:

The equipment blank sample *Rinsate-220615* was submitted for volatile analysis.

- i. All results less than LOQ and project specified objectives?

Yes  No  N/A  Comments:

- ii. If above LOQ or project specified objectives, what samples are affected?

Comments:

N/A; see above.

- iii. Data quality or usability affected?

Comments:

Data quality/usability is not affected, see above.

7. Other Data Flags/Qualifiers (ACOE, AFCEE, Lab Specific, etc.)

- a. Defined and appropriate?

Yes  No  N/A  Comments:

## Laboratory Data Review Checklist

Completed By:

Justin Risley, EIT

Title:

Engineering Staff

Date:

August 16, 2022

Consultant Firm:

Shannon & Wilson, Inc.

Laboratory Name:

OnSite Environmental, Inc.

Laboratory Report Number:

2206-169

Laboratory Report Date:

June 24, 2022

CS Site Name:

FL358

Laboratory Report Date:

**Note: Any N/A or No box checked must have an explanation in the comments box.**

1. Laboratory

a. Did an approved laboratory receive and perform all the submitted sample analyses?

Yes  No  N/A  Comments:

b. If the samples were transferred to another “network” laboratory or sub-contracted to an alternate laboratory, was the laboratory performing the analyses also approved?

Yes  No  N/A  Comments:

The samples were not transferred to another laboratory.

2. Chain of Custody (CoC)

a. CoC information completed, signed, and dated (including released/received by)?

Yes  No  N/A  Comments:

b. Correct analyses requested?

Yes  No  N/A  Comments:

3. Laboratory Sample Receipt Documentation

a. Sample/cooler temperature documented and within range at receipt (0° to 6° C)?

Yes  No  N/A  Comments:

b. Sample preservation acceptable – acidified waters, Methanol preserved VOC soil (GRO, BTEX, Volatile Chlorinated Solvents, etc.)?

Yes  No  N/A  Comments:

c. Sample condition documented – broken, leaking (Methanol), zero headspace (VOC vials)?

Yes  No  N/A  Comments:

The sample receipt form noted the samples arrived in good condition.

Laboratory Report Date:

- d. If there were any discrepancies, were they documented? For example, incorrect sample containers/preservation, sample temperature outside of acceptable range, insufficient or missing samples, etc.?

Yes  No  N/A  Comments:

No discrepancies were noted.

- e. Data quality or usability affected?

Comments:

The laboratories do not state an effect on the data quality or usability; please see the following sections for our assessment.

#### 4. Case Narrative

- a. Present and understandable?

Yes  No  N/A  Comments:

- b. Discrepancies, errors, or QC failures identified by the lab?

Yes  No  N/A  Comments:

The lab did not note any discrepancies, errors, or QC failures.

- c. Were all corrective actions documented?

Yes  No  N/A  Comments:

See above.

- d. What is the effect on data quality/usability according to the case narrative?

Comments:

The laboratories do not state an effect on the data quality or usability; please see the following sections for our assessment.

#### 5. Samples Results

- a. Correct analyses performed/reported as requested on COC?

Yes  No  N/A  Comments:

- b. All applicable holding times met?

Yes  No  N/A  Comments:

Laboratory Report Date:

c. All soils reported on a dry weight basis?

Yes  No  N/A  Comments:

d. Are the reported LOQs less than the Cleanup Level or the minimum required detection level for the project?

Yes  No  N/A  Comments:

e. Data quality or usability affected?

6. QC Samples

a. Method Blank

i. One method blank reported per matrix, analysis and 20 samples?

Yes  No  N/A  Comments:

ii. All method blank results less than limit of quantitation (LOQ) or project specified objectives?

Yes  No  N/A  Comments:

iii. If above LOQ or project specified objectives, what samples are affected?

Comments:

iv. Do the affected sample(s) have data flags? If so, are the data flags clearly defined?

Yes  No  N/A  Comments:

v. Data quality or usability affected?

Comments:

## Laboratory Report Date:

## b. Laboratory Control Sample/Duplicate (LCS/LCSD)

- i. Organics – One LCS/LCSD reported per matrix, analysis and 20 samples?

Yes  No  N/A  Comments:

A spike blank and spike blank duplicate were reported for volatile organics by EPA 8260D in water.

- ii. Metals/Inorganics – one LCS and one sample duplicate reported per matrix, analysis and 20 samples?

Yes  No  N/A  Comments:

Metals/Inorganics were not analyzed with this work order.

- iii. Accuracy – All percent recoveries (%R) reported and within method or laboratory limits and project specified objectives, if applicable?

Yes  No  N/A  Comments:

- iv. Precision – All relative percent differences (RPD) reported and less than method or laboratory limits and project specified objectives, if applicable? RPD reported from LCS/LCSD, and or sample/sample duplicate.

Yes  No  N/A  Comments:

- v. If %R or RPD is outside of acceptable limits, what samples are affected?

Comments:

N/A; see above.

- vi. Do the affected sample(s) have data flags? If so, are the data flags clearly defined?

Yes  No  N/A  Comments:

See above.

- vii. Data quality or usability affected? (Use comment box to explain.)

Comments:

Data quality and usability are not affected; see above.

## c. Matrix Spike/Matrix Spike Duplicate (MS/MSD)

**Note: Leave blank if not required for project**

- i. Organics – One MS/MSD reported per matrix, analysis and 20 samples?

Yes  No  N/A  Comments:

The laboratory reported an MS/MSD for volatile organics by method EPA 8260D in soil.

Laboratory Report Date:

ii. Metals/Inorganics – one MS and one MSD reported per matrix, analysis and 20 samples?

Yes  No  N/A  Comments:

Metals/Inorganics were not analyzed with this work order.

iii. Accuracy – All percent recoveries (%R) reported and within method or laboratory limits and project specified objectives, if applicable?

Yes  No  N/A  Comments:

iv. Precision – All relative percent differences (RPD) reported and less than method or laboratory limits and project specified objectives, if applicable? RPD reported from MS/MSD, and or sample/sample duplicate.

Yes  No  N/A  Comments:

v. If %R or RPD is outside of acceptable limits, what samples are affected?

Comments:

N/A; see above.

vi. Do the affected sample(s) have data flags? If so, are the data flags clearly defined?

Yes  No  N/A  Comments:

See above.

vii. Data quality or usability affected? (Use comment box to explain.)

Comments:

The data quality and usability were not affected; see above.

d. Surrogates – Organics Only or Isotope Dilution Analytes (IDA) – Isotope Dilution Methods Only

i. Are surrogate/IDA recoveries reported for organic analyses – field, QC and laboratory samples?

Yes  No  N/A  Comments:

ii. Accuracy – All percent recoveries (%R) reported and within method or laboratory limits and project specified objectives, if applicable?

Yes  No  N/A  Comments:

Laboratory Report Date:

iii. Do the sample results with failed surrogate/IDA recoveries have data flags? If so, are the data flags clearly defined?

Yes  No  N/A  Comments:

There were no surrogate recovery or IDA failures associated with this work order.

iv. Data quality or usability affected?

Comments:

The data quality and usability were not affected; see above.

e. Trip Blanks

i. One trip blank reported per matrix, analysis and for each cooler containing volatile samples? (If not, enter explanation below.)

Yes  No  N/A  Comments:

ii. Is the cooler used to transport the trip blank and VOA samples clearly indicated on the COC? (If not, a comment explaining why must be entered below)

Yes  No  N/A  Comments:

Only one cooler was used.

iii. All results less than LOQ and project specified objectives?

Yes  No  N/A  Comments:

iv. If above LOQ or project specified objectives, what samples are affected?

Comments:

See above.

v. Data quality or usability affected?

Comments:

The data quality and usability were not affected.

f. Field Duplicate

i. One field duplicate submitted per matrix, analysis and 10 project samples?

Yes  No  N/A  Comments:

Field duplicate pair *FL358-MW9-27-28* and *Dup-220616* were submitted to the lab.

ii. Submitted blind to lab?

Yes  No  N/A  Comments:

Laboratory Report Date:

- iii. Precision – All relative percent differences (RPD) less than specified project objectives?  
(Recommended: 30% water, 50% soil)

$$\text{RPD (\%)} = \text{Absolute value of: } \frac{(R_1 - R_2)}{((R_1 + R_2)/2)} \times 100$$

Where  $R_1$  = Sample Concentration  
 $R_2$  = Field Duplicate Concentration

Yes  No  N/A  Comments:

The RPDs, where calculable, were less than 50%.

- iv. Data quality or usability affected? (Use the comment box to explain why or why not.)

Comments:

The data quality and usability are not affected.

- g. Decontamination or Equipment Blank (If not applicable, a comment stating why must be entered below)?

Yes  No  N/A  Comments:

The equipment blank sample *Rinsate-220616* was submitted for volatile analysis.

- i. All results less than LOQ and project specified objectives?

Yes  No  N/A  Comments:

- ii. If above LOQ or project specified objectives, what samples are affected?

Comments:

N/A; see above.

- iii. Data quality or usability affected?

Comments:

Data quality/usability is not affected, see above.

7. Other Data Flags/Qualifiers (ACOE, AFCEE, Lab Specific, etc.)

- a. Defined and appropriate?

Yes  No  N/A  Comments:

**Laboratory Data Review Checklist**

Completed By:

Justin Risley, EIT

Title:

Engineering Staff

Date:

August 16, 2022

Consultant Firm:

Shannon & Wilson, Inc.

Laboratory Name:

OnSite Environmental, Inc.

Laboratory Report Number:

2206-239

Laboratory Report Date:

July 1, 2022

CS Site Name:

FL358

Laboratory Report Date:

**Note: Any N/A or No box checked must have an explanation in the comments box.**

1. Laboratory

a. Did an approved laboratory receive and perform all the submitted sample analyses?

Yes  No  N/A  Comments:

b. If the samples were transferred to another “network” laboratory or sub-contracted to an alternate laboratory, was the laboratory performing the analyses also approved?

Yes  No  N/A  Comments:

The samples were not transferred to another laboratory.

2. Chain of Custody (CoC)

a. CoC information completed, signed, and dated (including released/received by)?

Yes  No  N/A  Comments:

b. Correct analyses requested?

Yes  No  N/A  Comments:

3. Laboratory Sample Receipt Documentation

a. Sample/cooler temperature documented and within range at receipt (0° to 6° C)?

Yes  No  N/A  Comments:

b. Sample preservation acceptable – acidified waters, Methanol preserved VOC soil (GRO, BTEX, Volatile Chlorinated Solvents, etc.)?

Yes  No  N/A  Comments:

c. Sample condition documented – broken, leaking (Methanol), zero headspace (VOC vials)?

Yes  No  N/A  Comments:

The sample receipt form noted the samples arrived in good condition.

## Laboratory Report Date:

- d. If there were any discrepancies, were they documented? For example, incorrect sample containers/preservation, sample temperature outside of acceptable range, insufficient or missing samples, etc.?

Yes  No  N/A  Comments:

No discrepancies were noted.

- e. Data quality or usability affected?

Comments:

The laboratories do not state an effect on the data quality or usability; please see the following sections for our assessment.

#### 4. Case Narrative

- a. Present and understandable?

Yes  No  N/A  Comments:

- b. Discrepancies, errors, or QC failures identified by the lab?

Yes  No  N/A  Comments:

The lab did not note any discrepancies, errors, or QC failures.

- c. Were all corrective actions documented?

Yes  No  N/A  Comments:

See above.

- d. What is the effect on data quality/usability according to the case narrative?

Comments:

The laboratories do not state an effect on the data quality or usability; please see the following sections for our assessment.

#### 5. Samples Results

- a. Correct analyses performed/reported as requested on COC?

Yes  No  N/A  Comments:

- b. All applicable holding times met?

Yes  No  N/A  Comments:

Laboratory Report Date:

c. All soils reported on a dry weight basis?

Yes  No  N/A  Comments:

d. Are the reported LOQs less than the Cleanup Level or the minimum required detection level for the project?

Yes  No  N/A  Comments:

e. Data quality or usability affected?

Data quality or usability are not affected.

## 6. QC Samples

a. Method Blank

i. One method blank reported per matrix, analysis and 20 samples?

Yes  No  N/A  Comments:

ii. All method blank results less than limit of quantitation (LOQ) or project specified objectives?

Yes  No  N/A  Comments:

iii. If above LOQ or project specified objectives, what samples are affected?

Comments:

None.

iv. Do the affected sample(s) have data flags? If so, are the data flags clearly defined?

Yes  No  N/A  Comments:

See above.

v. Data quality or usability affected?

Comments:

Data quality and usability are not affected.

Laboratory Report Date:

b. Laboratory Control Sample/Duplicate (LCS/LCSD)

i. Organics – One LCS/LCSD reported per matrix, analysis and 20 samples?

Yes  No  N/A  Comments:

A spike blank and a spike blank and spike blank duplicate pair were reported for volatile organics by EPA 8260D in water.

ii. Metals/Inorganics – one LCS and one sample duplicate reported per matrix, analysis and 20 samples?

Yes  No  N/A  Comments:

Metals/Inorganics were not analyzed with this work order.

iii. Accuracy – All percent recoveries (%R) reported and within method or laboratory limits and project specified objectives, if applicable?

Yes  No  N/A  Comments:

iv. Precision – All relative percent differences (RPD) reported and less than method or laboratory limits and project specified objectives, if applicable? RPD reported from LCS/LCSD, and or sample/sample duplicate.

Yes  No  N/A  Comments:

v. If %R or RPD is outside of acceptable limits, what samples are affected?

Comments:

N/A; see above.

vi. Do the affected sample(s) have data flags? If so, are the data flags clearly defined?

Yes  No  N/A  Comments:

See above.

vii. Data quality or usability affected? (Use comment box to explain.)

Comments:

Data usability is not affected; see above.

c. Matrix Spike/Matrix Spike Duplicate (MS/MSD)

**Note: Leave blank if not required for project**

i. Organics – One MS/MSD reported per matrix, analysis and 20 samples?

Yes  No  N/A  Comments:

The laboratory reported an MS/MSD for volatile organics by method EPA 8260D in soil.

Laboratory Report Date:

ii. Metals/Inorganics – one MS and one MSD reported per matrix, analysis and 20 samples?

Yes  No  N/A  Comments:

Metals/Inorganics were not analyzed with this work order.

iii. Accuracy – All percent recoveries (%R) reported and within method or laboratory limits and project specified objectives, if applicable?

Yes  No  N/A  Comments:

iv. Precision – All relative percent differences (RPD) reported and less than method or laboratory limits and project specified objectives, if applicable? RPD reported from MS/MSD, and or sample/sample duplicate.

Yes  No  N/A  Comments:

v. If %R or RPD is outside of acceptable limits, what samples are affected?

Comments:

N/A; see above.

vi. Do the affected sample(s) have data flags? If so, are the data flags clearly defined?

Yes  No  N/A  Comments:

See above.

vii. Data quality or usability affected? (Use comment box to explain.)

Comments:

The data quality and usability were not affected; see above.

d. Surrogates – Organics Only or Isotope Dilution Analytes (IDA) – Isotope Dilution Methods Only

i. Are surrogate/IDA recoveries reported for organic analyses – field, QC and laboratory samples?

Yes  No  N/A  Comments:

ii. Accuracy – All percent recoveries (%R) reported and within method or laboratory limits and project specified objectives, if applicable?

Yes  No  N/A  Comments:

## Laboratory Report Date:

iii. Do the sample results with failed surrogate/IDA recoveries have data flags? If so, are the data flags clearly defined?

Yes  No  N/A  Comments:

There were no surrogate recovery or IDA failures associated with this work order.

iv. Data quality or usability affected?

Comments:

The data quality and usability were not affected; see above.

e. Trip Blanks

i. One trip blank reported per matrix, analysis and for each cooler containing volatile samples? (If not, enter explanation below.)

Yes  No  N/A  Comments:

ii. Is the cooler used to transport the trip blank and VOA samples clearly indicated on the COC? (If not, a comment explaining why must be entered below)

Yes  No  N/A  Comments:

Only one cooler was used to transport samples.

iii. All results less than LOQ and project specified objectives?

Yes  No  N/A  Comments:

iv. If above LOQ or project specified objectives, what samples are affected?

Comments:

See above.

v. Data quality or usability affected?

Comments:

The data quality and usability were not affected.

f. Field Duplicate

i. One field duplicate submitted per matrix, analysis and 10 project samples?

Yes  No  N/A  Comments:

Field duplicate pair *FL358-MW9-24-25* and *Dup-220621* were submitted to the lab.

ii. Submitted blind to lab?

Yes  No  N/A  Comments:

Laboratory Report Date:

- iii. Precision – All relative percent differences (RPD) less than specified project objectives?  
(Recommended: 30% water, 50% soil)

$$\text{RPD (\%)} = \text{Absolute value of: } \frac{(R_1 - R_2)}{((R_1 + R_2)/2)} \times 100$$

Where  $R_1$  = Sample Concentration  
 $R_2$  = Field Duplicate Concentration

Yes  No  N/A  Comments:

The RPDs, where calculable, were less than 50%.

- iv. Data quality or usability affected? (Use the comment box to explain why or why not.)

Comments:

The data quality and usability were not affected.

- g. Decontamination or Equipment Blank (If not applicable, a comment stating why must be entered below)?

Yes  No  N/A  Comments:

The equipment blank sample *Rinsate-220621* was submitted for volatile analysis.

- i. All results less than LOQ and project specified objectives?

Yes  No  N/A  Comments:

- ii. If above LOQ or project specified objectives, what samples are affected?

Comments:

N/A; see above.

- iii. Data quality or usability affected?

Comments:

Data quality/usability is not affected, see above.

7. Other Data Flags/Qualifiers (ACOE, AFCEE, Lab Specific, etc.)

- a. Defined and appropriate?

Yes  No  N/A  Comments:

**Laboratory Data Review Checklist**

Completed By:

Justin Risley, EIT

Title:

Engineering Staff

Date:

August 16, 2022

Consultant Firm:

Shannon & Wilson, Inc.

Laboratory Name:

OnSite Environmental, Inc.

Laboratory Report Number:

2206-240

Laboratory Report Date:

June 30, 2022

CS Site Name:

FL358

Laboratory Report Date:

**Note: Any N/A or No box checked must have an explanation in the comments box.**

1. Laboratory

a. Did an approved laboratory receive and perform all the submitted sample analyses?

Yes  No  N/A  Comments:

b. If the samples were transferred to another “network” laboratory or sub-contracted to an alternate laboratory, was the laboratory performing the analyses also approved?

Yes  No  N/A  Comments:

The samples were not transferred to another laboratory.

2. Chain of Custody (CoC)

a. CoC information completed, signed, and dated (including released/received by)?

Yes  No  N/A  Comments:

b. Correct analyses requested?

Yes  No  N/A  Comments:

3. Laboratory Sample Receipt Documentation

a. Sample/cooler temperature documented and within range at receipt (0° to 6° C)?

Yes  No  N/A  Comments:

b. Sample preservation acceptable – acidified waters, Methanol preserved VOC soil (GRO, BTEX, Volatile Chlorinated Solvents, etc.)?

Yes  No  N/A  Comments:

c. Sample condition documented – broken, leaking (Methanol), zero headspace (VOC vials)?

Yes  No  N/A  Comments:

The sample receipt form noted the samples arrived in good condition.

## Laboratory Report Date:

- d. If there were any discrepancies, were they documented? For example, incorrect sample containers/preservation, sample temperature outside of acceptable range, insufficient or missing samples, etc.?

Yes  No  N/A  Comments:

No discrepancies were noted.

- e. Data quality or usability affected?

Comments:

The laboratories do not state an effect on the data quality or usability; please see the following sections for our assessment.

#### 4. Case Narrative

- a. Present and understandable?

Yes  No  N/A  Comments:

- b. Discrepancies, errors, or QC failures identified by the lab?

Yes  No  N/A  Comments:

The lab notes that the client-requested PQL of 0.001 ppm was not achievable for some compounds in project sample *FL358-MW5A-25-26* due to the necessary dilution of the sample.

- c. Were all corrective actions documented?

Yes  No  N/A  Comments:

Project sample *FL358-MW5A-25-26* was diluted.

- d. What is the effect on data quality/usability according to the case narrative?

Comments:

The laboratories do not state an effect on the data quality or usability; please see the following sections for our assessment.

#### 5. Samples Results

- a. Correct analyses performed/reported as requested on COC?

Yes  No  N/A  Comments:

- b. All applicable holding times met?

Yes  No  N/A  Comments:

Laboratory Report Date:

c. All soils reported on a dry weight basis?

Yes  No  N/A  Comments:

d. Are the reported LOQs less than the Cleanup Level or the minimum required detection level for the project?

Yes  No  N/A  Comments:

The elevated PQL (LOQ) noted in the case narrative is reported below the associated regulatory limits and the results are not affected.

e. Data quality or usability affected?

Data quality or usability are not affected.

## 6. QC Samples

a. Method Blank

i. One method blank reported per matrix, analysis and 20 samples?

Yes  No  N/A  Comments:

ii. All method blank results less than limit of quantitation (LOQ) or project specified objectives?

Yes  No  N/A  Comments:

iii. If above LOQ or project specified objectives, what samples are affected?

Comments:

None.

iv. Do the affected sample(s) have data flags? If so, are the data flags clearly defined?

Yes  No  N/A  Comments:

See above.

v. Data quality or usability affected?

Comments:

Data quality and usability are not affected.

## Laboratory Report Date:

## b. Laboratory Control Sample/Duplicate (LCS/LCSD)

- i. Organics – One LCS/LCSD reported per matrix, analysis and 20 samples?

Yes  No  N/A  Comments:

A spike blank and spike blank duplicate pair were reported for volatile organics by EPA 8260D in water.

- ii. Metals/Inorganics – one LCS and one sample duplicate reported per matrix, analysis and 20 samples?

Yes  No  N/A  Comments:

Metals/Inorganics were not analyzed with this work order.

- iii. Accuracy – All percent recoveries (%R) reported and within method or laboratory limits and project specified objectives, if applicable?

Yes  No  N/A  Comments:

- iv. Precision – All relative percent differences (RPD) reported and less than method or laboratory limits and project specified objectives, if applicable? RPD reported from LCS/LCSD, and or sample/sample duplicate.

Yes  No  N/A  Comments:

- v. If %R or RPD is outside of acceptable limits, what samples are affected?

Comments:

N/A; see above.

- vi. Do the affected sample(s) have data flags? If so, are the data flags clearly defined?

Yes  No  N/A  Comments:

See above.

- vii. Data quality or usability affected? (Use comment box to explain.)

Comments:

Data quality and usability are not affected; see above.

## c. Matrix Spike/Matrix Spike Duplicate (MS/MSD)

**Note: Leave blank if not required for project**

- i. Organics – One MS/MSD reported per matrix, analysis and 20 samples?

Yes  No  N/A  Comments:

The laboratory reported an MS/MSD for volatile organics by method EPA 8260D in soil.

Laboratory Report Date:

ii. Metals/Inorganics – one MS and one MSD reported per matrix, analysis and 20 samples?

Yes  No  N/A  Comments:

Metals/Inorganics were not analyzed with this work order.

iii. Accuracy – All percent recoveries (%R) reported and within method or laboratory limits and project specified objectives, if applicable?

Yes  No  N/A  Comments:

iv. Precision – All relative percent differences (RPD) reported and less than method or laboratory limits and project specified objectives, if applicable? RPD reported from MS/MSD, and or sample/sample duplicate.

Yes  No  N/A  Comments:

v. If %R or RPD is outside of acceptable limits, what samples are affected?

Comments:

N/A; see above.

vi. Do the affected sample(s) have data flags? If so, are the data flags clearly defined?

Yes  No  N/A  Comments:

See above.

vii. Data quality or usability affected? (Use comment box to explain.)

Comments:

The data quality and usability were not affected; see above.

d. Surrogates – Organics Only or Isotope Dilution Analytes (IDA) – Isotope Dilution Methods Only

i. Are surrogate/IDA recoveries reported for organic analyses – field, QC and laboratory samples?

Yes  No  N/A  Comments:

ii. Accuracy – All percent recoveries (%R) reported and within method or laboratory limits and project specified objectives, if applicable?

Yes  No  N/A  Comments:

Laboratory Report Date:

iii. Do the sample results with failed surrogate/IDA recoveries have data flags? If so, are the data flags clearly defined?

Yes  No  N/A  Comments:

There were no surrogate recovery or IDA failures associated with this work order.

iv. Data quality or usability affected?

Comments:

The data quality and usability were not affected; see above.

e. Trip Blanks

i. One trip blank reported per matrix, analysis and for each cooler containing volatile samples? (If not, enter explanation below.)

Yes  No  N/A  Comments:

ii. Is the cooler used to transport the trip blank and VOA samples clearly indicated on the COC? (If not, a comment explaining why must be entered below)

Yes  No  N/A  Comments:

Only one cooler was used to transport samples.

iii. All results less than LOQ and project specified objectives?

Yes  No  N/A  Comments:

iv. If above LOQ or project specified objectives, what samples are affected?

Comments:

See above.

v. Data quality or usability affected?

Comments:

The data quality and usability were not affected.

f. Field Duplicate

i. One field duplicate submitted per matrix, analysis and 10 project samples?

Yes  No  N/A  Comments:

A field duplicate pair was not submitted with this work order.

ii. Submitted blind to lab?

Yes  No  N/A  Comments:

A field duplicate pair was not submitted with this work order.

Laboratory Report Date:

- iii. Precision – All relative percent differences (RPD) less than specified project objectives?  
(Recommended: 30% water, 50% soil)

$$\text{RPD (\%)} = \text{Absolute value of: } \frac{(R_1 - R_2)}{((R_1 + R_2)/2)} \times 100$$

Where  $R_1$  = Sample Concentration  
 $R_2$  = Field Duplicate Concentration

Yes  No  N/A  Comments:

A field duplicate pair was not submitted with this work order.

- iv. Data quality or usability affected? (Use the comment box to explain why or why not.)

Comments:

N/A; see above.

- g. Decontamination or Equipment Blank (If not applicable, a comment stating why must be entered below)?

Yes  No  N/A  Comments:

The equipment blank sample *Rinsate-220622* was submitted for volatile analysis.

- i. All results less than LOQ and project specified objectives?

Yes  No  N/A  Comments:

- ii. If above LOQ or project specified objectives, what samples are affected?

Comments:

N/A; see above.

- iii. Data quality or usability affected?

Comments:

Data quality/usability is not affected, see above.

7. Other Data Flags/Qualifiers (ACOE, AFCEE, Lab Specific, etc.)

- a. Defined and appropriate?

Yes  No  N/A  Comments:

**Laboratory Data Review Checklist**

Completed By:

Justin Risley, EIT

Title:

Engineering Staff

Date:

August 16, 2022

Consultant Firm:

Shannon & Wilson, Inc.

Laboratory Name:

OnSite Environmental, Inc.

Laboratory Report Number:

2206-292

Laboratory Report Date:

July 11, 2022

CS Site Name:

FL358

Laboratory Report Date:

**Note: Any N/A or No box checked must have an explanation in the comments box.**

1. Laboratory

a. Did an approved laboratory receive and perform all the submitted sample analyses?

Yes  No  N/A  Comments:

b. If the samples were transferred to another “network” laboratory or sub-contracted to an alternate laboratory, was the laboratory performing the analyses also approved?

Yes  No  N/A  Comments:

2. Chain of Custody (CoC)

a. CoC information completed, signed, and dated (including released/received by)?

Yes  No  N/A  Comments:

b. Correct analyses requested?

Yes  No  N/A  Comments:

3. Laboratory Sample Receipt Documentation

a. Sample/cooler temperature documented and within range at receipt (0° to 6° C)?

Yes  No  N/A  Comments:

b. Sample preservation acceptable – acidified waters, Methanol preserved VOC soil (GRO, BTEX, Volatile Chlorinated Solvents, etc.)?

Yes  No  N/A  Comments:

c. Sample condition documented – broken, leaking (Methanol), zero headspace (VOC vials)?

Yes  No  N/A  Comments:

The sample receipt form noted the samples arrived in good condition.

Laboratory Report Date:

- d. If there were any discrepancies, were they documented? For example, incorrect sample containers/preservation, sample temperature outside of acceptable range, insufficient or missing samples, etc.?

Yes  No  N/A  Comments:

No discrepancies were noted.

- e. Data quality or usability affected?

Comments:

The laboratories do not state an effect on the data quality or usability; please see the following sections for our assessment.

#### 4. Case Narrative

- a. Present and understandable?

Yes  No  N/A  Comments:

- b. Discrepancies, errors, or QC failures identified by the lab?

Yes  No  N/A  Comments:

OnSite Environmental Inc. noted that project sample *FL358-MW11-220627* was chosen as the MS/MSD sample; however, the sample contained too much methane to report meaningful recovery results for dissolved gases analysis, so an SB/SBD was analyzed and reported instead.

- c. Were all corrective actions documented?

Yes  No  N/A  Comments:

An MS/MSD was not able to be performed; therefore, a SB/SBD was analyzed instead.

- d. What is the effect on data quality/usability according to the case narrative?

Comments:

The laboratories do not state an effect on the data quality or usability; please see the following sections for our assessment.

#### 5. Samples Results

- a. Correct analyses performed/reported as requested on COC?

Yes  No  N/A  Comments:

- b. All applicable holding times met?

Yes  No  N/A  Comments:

Laboratory Report Date:

c. All soils reported on a dry weight basis?

Yes  No  N/A  Comments:

Soil samples were not submitted with this work order.

d. Are the reported LOQs less than the Cleanup Level or the minimum required detection level for the project?

Yes  No  N/A  Comments:

e. Data quality or usability affected?

Data quality or usability are not affected.

## 6. QC Samples

a. Method Blank

i. One method blank reported per matrix, analysis and 20 samples?

Yes  No  N/A  Comments:

ii. All method blank results less than limit of quantitation (LOQ) or project specified objectives?

Yes  No  N/A  Comments:

iii. If above LOQ or project specified objectives, what samples are affected?

Comments:

None.

iv. Do the affected sample(s) have data flags? If so, are the data flags clearly defined?

Yes  No  N/A  Comments:

See above.

v. Data quality or usability affected?

Comments:

Data quality and usability are not affected.

## Laboratory Report Date:

## b. Laboratory Control Sample/Duplicate (LCS/LCSD)

## i. Organics – One LCS/LCSD reported per matrix, analysis and 20 samples?

Yes  No  N/A  Comments:

A spike blank and spike blank duplicate were reported for dissolved gases by method RSK 175.

A spike blank and laboratory duplicate were reported for total organic carbon by method SM 5310B.

## ii. Metals/Inorganics – one LCS and one sample duplicate reported per matrix, analysis and 20 samples?

Yes  No  N/A  Comments:A spike blank and duplicate were reported for ammonia by method SM 4500-NH<sub>3</sub> D, nitrite by method EPA 353.2, and nitrate by method EPA 353.2.

A LCS and laboratory duplicate were reported for ferrous iron by method SM 3500-Fe B.

A laboratory duplicate was reported for total iron by method EPA 6010D, and BOD by method SM 5210B,

## iii. Accuracy – All percent recoveries (%R) reported and within method or laboratory limits and project specified objectives, if applicable?

Yes  No  N/A  Comments:The recovery of acetylene in the SBD was below the laboratory lower control limit and, therefore, flagged by the laboratory. We consider the reporting limit for this analyte to be estimated. The non-detect results for samples *FL358-MW10-220627* and *FL358-MW11-220627* are presented as “UJ”.

## iv. Precision – All relative percent differences (RPD) reported and less than method or laboratory limits and project specified objectives, if applicable? RPD reported from LCS/LCSD, and or sample/sample duplicate.

Yes  No  N/A  Comments:

The duplicate pair RPD for nitrate was above laboratory control limits.

## v. If %R or RPD is outside of acceptable limits, what samples are affected?

Comments:

Project sample *FL358-MW11-220627* is affected. The nitrate result is considered estimated with no direction of bias (flagged with a “J”).

## vi. Do the affected sample(s) have data flags? If so, are the data flags clearly defined?

Yes  No  N/A  Comments:

See above.

## vii. Data quality or usability affected? (Use comment box to explain.)

Comments:

Data usability is affected; see above. The data is considered usable with the applied qualifier.

Laboratory Report Date:

c. Matrix Spike/Matrix Spike Duplicate (MS/MSD)

**Note: Leave blank if not required for project**

i. Organics – One MS/MSD reported per matrix, analysis and 20 samples?

Yes  No  N/A  Comments:

The laboratory reported an MS/MSD for volatile organics by method EPA 8260D and an MS for total organic carbon by method SM 5310B.

ii. Metals/Inorganics – one MS and one MSD reported per matrix, analysis and 20 samples?

Yes  No  N/A  Comments:

The laboratory reported an MS for ammonia by method SM4500-NH<sub>3</sub> D, nitrite by method EPA 353.2, and nitrate by method EPA 353.2.

The laboratory reported an MS/MSD for total iron by method EPA 6010D and ferrous iron by method SM 3500-Fe B.

iii. Accuracy – All percent recoveries (%R) reported and within method or laboratory limits and project specified objectives, if applicable?

Yes  No  N/A  Comments:

iv. Precision – All relative percent differences (RPD) reported and less than method or laboratory limits and project specified objectives, if applicable? RPD reported from MS/MSD, and or sample/sample duplicate.

Yes  No  N/A  Comments:

v. If %R or RPD is outside of acceptable limits, what samples are affected?

Comments:

N/A; see above.

vi. Do the affected sample(s) have data flags? If so, are the data flags clearly defined?

Yes  No  N/A  Comments:

See above.

Laboratory Report Date:

vii. Data quality or usability affected? (Use comment box to explain.)

Comments:

The data quality and usability were not affected; see above.

d. Surrogates – Organics Only or Isotope Dilution Analytes (IDA) – Isotope Dilution Methods Only

i. Are surrogate/IDA recoveries reported for organic analyses – field, QC and laboratory samples?

Yes  No  N/A  Comments:

ii. Accuracy – All percent recoveries (%R) reported and within method or laboratory limits and project specified objectives, if applicable?

Yes  No  N/A  Comments:

iii. Do the sample results with failed surrogate/IDA recoveries have data flags? If so, are the data flags clearly defined?

Yes  No  N/A  Comments:

There were no surrogate recovery or IDA failures associated with this work order.

iv. Data quality or usability affected?

Comments:

The data quality and usability were not affected; see above.

e. Trip Blanks

i. One trip blank reported per matrix, analysis and for each cooler containing volatile samples? (If not, enter explanation below.)

Yes  No  N/A  Comments:

ii. Is the cooler used to transport the trip blank and VOA samples clearly indicated on the COC? (If not, a comment explaining why must be entered below)

Yes  No  N/A  Comments:

Only one cooler was used.

iii. All results less than LOQ and project specified objectives?

Yes  No  N/A  Comments:

Laboratory Report Date:

iv. If above LOQ or project specified objectives, what samples are affected?

Comments:

See above.

v. Data quality or usability affected?

Comments:

The data quality and usability were not affected.

f. Field Duplicate

i. One field duplicate submitted per matrix, analysis and 10 project samples?

Yes  No  N/A  Comments:

A field duplicate was not submitted with this work order.

ii. Submitted blind to lab?

Yes  No  N/A  Comments:iii. Precision – All relative percent differences (RPD) less than specified project objectives?  
(Recommended: 30% water, 50% soil)

$$\text{RPD (\%)} = \text{Absolute value of: } \frac{(R_1 - R_2)}{((R_1 + R_2)/2)} \times 100$$

Where  $R_1$  = Sample Concentration $R_2$  = Field Duplicate ConcentrationYes  No  N/A  Comments:

iv. Data quality or usability affected? (Use the comment box to explain why or why not.)

Comments:

N/A; see above.

g. Decontamination or Equipment Blank (If not applicable, a comment stating why must be entered below)?

Yes  No  N/A  Comments:The equipment blank sample *Rinsate-220627* was submitted for volatile analysis.

i. All results less than LOQ and project specified objectives?

Yes  No  N/A  Comments:

Laboratory Report Date:

ii. If above LOQ or project specified objectives, what samples are affected?

Comments:

N/A; see above.

iii. Data quality or usability affected?

Comments:

Data quality/usability is not affected, see above.

7. Other Data Flags/Qualifiers (ACOE, AFCEE, Lab Specific, etc.)

a. Defined and appropriate?

Yes  No  N/A

Comments:

**Laboratory Data Review Checklist**

Completed By:

Justin Risley, EIT

Title:

Engineering Staff

Date:

August 16, 2022

Consultant Firm:

Shannon & Wilson, Inc.

Laboratory Name:

OnSite Environmental, Inc.

Laboratory Report Number:

2206-308

Laboratory Report Date:

July 14, 2022

CS Site Name:

FL358

Laboratory Report Date:

**Note: Any N/A or No box checked must have an explanation in the comments box.**

1. Laboratory

a. Did an approved laboratory receive and perform all the submitted sample analyses?

Yes  No  N/A  Comments:

b. If the samples were transferred to another “network” laboratory or sub-contracted to an alternate laboratory, was the laboratory performing the analyses also approved?

Yes  No  N/A  Comments:

2. Chain of Custody (CoC)

a. CoC information completed, signed, and dated (including released/received by)?

Yes  No  N/A  Comments:

b. Correct analyses requested?

Yes  No  N/A  Comments:

3. Laboratory Sample Receipt Documentation

a. Sample/cooler temperature documented and within range at receipt (0° to 6° C)?

Yes  No  N/A  Comments:

b. Sample preservation acceptable – acidified waters, Methanol preserved VOC soil (GRO, BTEX, Volatile Chlorinated Solvents, etc.)?

Yes  No  N/A  Comments:

c. Sample condition documented – broken, leaking (Methanol), zero headspace (VOC vials)?

Yes  No  N/A  Comments:

The sample receipt form noted the samples arrived in good condition.

Laboratory Report Date:

- d. If there were any discrepancies, were they documented? For example, incorrect sample containers/preservation, sample temperature outside of acceptable range, insufficient or missing samples, etc.?

Yes  No  N/A  Comments:

No discrepancies were noted.

- e. Data quality or usability affected?

Comments:

The laboratories do not state an effect on the data quality or usability; please see the following sections for our assessment.

#### 4. Case Narrative

- a. Present and understandable?

Yes  No  N/A  Comments:

- b. Discrepancies, errors, or QC failures identified by the lab?

Yes  No  N/A  Comments:

OnSite Environmental Inc. noted the following:

Project samples *FL358-MW9-220628* and *FL358-MW100-220628* had surrogate recoveries outside of laboratory control limits. These samples were re-run with similar results, indicating probable matrix interference.

The sample chosen for the MS/MSD had high native concentrations of methane; therefore, no meaningful recovery data could be obtained for the compound. Acetylene was recovered below laboratory control limits. The lab states that proper statistical control limits for this compound are still being developed; therefore, this should not be considered a true quality control failure. A SB/SBD was analyzed with this set and all parameters were within control limits. We note the SB/SBD is not reported in this laboratory packet and our assessment of passing QC is based on the statement in the case narrative.

- c. Were all corrective actions documented?

Yes  No  N/A  Comments:

- d. What is the effect on data quality/usability according to the case narrative?

Comments:

The laboratory does not state an effect on the data quality or usability; please see the following sections for our assessment.

Laboratory Report Date:

5. Samples Results

a. Correct analyses performed/reported as requested on COC?

Yes  No  N/A  Comments:

--

b. All applicable holding times met?

Yes  No  N/A  Comments:

--

c. All soils reported on a dry weight basis?

Yes  No  N/A  Comments:

Soil samples were not submitted with this work order.

d. Are the reported LOQs less than the Cleanup Level or the minimum required detection level for the project?

Yes  No  N/A  Comments:

--

e. Data quality or usability affected?

Data quality or usability are not affected.

6. QC Samples

a. Method Blank

i. One method blank reported per matrix, analysis and 20 samples?

Yes  No  N/A  Comments:

--

ii. All method blank results less than limit of quantitation (LOQ) or project specified objectives?

Yes  No  N/A  Comments:

--

iii. If above LOQ or project specified objectives, what samples are affected?

Comments:

None.

Laboratory Report Date:

iv. Do the affected sample(s) have data flags? If so, are the data flags clearly defined?

Yes  No  N/A  Comments:

See above.

v. Data quality or usability affected?

Comments:

Data quality and usability are not affected.

b. Laboratory Control Sample/Duplicate (LCS/LCSD)

i. Organics – One LCS/LCSD reported per matrix, analysis and 20 samples?

Yes  No  N/A  Comments:

A spike blank and laboratory duplicate were reported for total organic carbon by method SM5310B. A laboratory duplicate was reported for BOD by method 5210B.

ii. Metals/Inorganics – one LCS and one sample duplicate reported per matrix, analysis and 20 samples?

Yes  No  N/A  Comments:

A spike blank and laboratory duplicate were reported for ammonia by method SM4500-NH<sub>3</sub> D, nitrite by method EPA 353.2, and nitrate by method EPA 353.2.

An LCS and laboratory duplicate were reported for ferrous iron by method SM 3500-Fe B.

A laboratory duplicate was reported for total metals by method EPA 6010D and BOD by method SM 5210B.

iii. Accuracy – All percent recoveries (%R) reported and within method or laboratory limits and project specified objectives, if applicable?

Yes  No  N/A  Comments:

iv. Precision – All relative percent differences (RPD) reported and less than method or laboratory limits and project specified objectives, if applicable? RPD reported from LCS/LCSD, and or sample/sample duplicate.

Yes  No  N/A  Comments:

v. If %R or RPD is outside of acceptable limits, what samples are affected?

Comments:

N/A; see above.

Laboratory Report Date:

vi. Do the affected sample(s) have data flags? If so, are the data flags clearly defined?

Yes  No  N/A  Comments:

vii. Data quality or usability affected? (Use comment box to explain.)

Comments:

Data quality and usability have not been affected.

c. Matrix Spike/Matrix Spike Duplicate (MS/MSD)

**Note: Leave blank if not required for project**

i. Organics – One MS/MSD reported per matrix, analysis and 20 samples?

Yes  No  N/A  Comments:

The laboratory reported an MS/MSD for volatile organics by method EPA 8260D and dissolved gases by method RSK 175.

The laboratory reported an MS for total organic carbon by method SM 5310B.

ii. Metals/Inorganics – one MS and one MSD reported per matrix, analysis and 20 samples?

Yes  No  N/A  Comments:

The laboratory reported an MS ammonia by method SM4500-NH<sub>3</sub> D, nitrite by method EPA 353.2, and nitrate by method EPA 353.2.

The laboratory reported an MS/MSD for total metals by method EPA 6010D and ferrous iron by method SM 3500-Fe B.

iii. Accuracy – All percent recoveries (%R) reported and within method or laboratory limits and project specified objectives, if applicable?

Yes  No  N/A  Comments:

Due to the low spike concentration relative to the native concentration, methane was not meaningfully recoverable. No qualification is required.

Acetylene was recovered below the lower control limits for the MS.

iv. Precision – All relative percent differences (RPD) reported and less than method or laboratory limits and project specified objectives, if applicable? RPD reported from MS/MSD, and or sample/sample duplicate.

Yes  No  N/A  Comments:

Laboratory Report Date:

- v. If %R or RPD is outside of acceptable limits, what samples are affected?

Comments:

Acetylene was not detected in any of the project samples. The non-detect result in the parent sample, *FL358-MW8-220628*, is affected by the low recovery and considered estimated (flagged with a "UJ").

- vi. Do the affected sample(s) have data flags? If so, are the data flags clearly defined?

Yes  No  N/A  Comments:

See above.

- vii. Data quality or usability affected? (Use comment box to explain.)

Comments:

The data quality was affected; see above. The data is considered usable, with the applied qualifier.

- d. Surrogates – Organics Only or Isotope Dilution Analytes (IDA) – Isotope Dilution Methods Only

- i. Are surrogate/IDA recoveries reported for organic analyses – field, QC and laboratory samples?

Yes  No  N/A  Comments:

- ii. Accuracy – All percent recoveries (%R) reported and within method or laboratory limits and project specified objectives, if applicable?

Yes  No  N/A  Comments:

Recovery of surrogate 1-butene in method RSK 175 was below laboratory control limits in project samples *FL358-MW9-220628* and *FL358-MW100-220628*. This is likely due to matrix interference.

The associated detected results are considered estimated and biased low (flagged with a "JL") and non-detect results are considered estimated (flagged with a "UJ").

- iii. Do the sample results with failed surrogate/IDA recoveries have data flags? If so, are the data flags clearly defined?

Yes  No  N/A  Comments:

See above.

- iv. Data quality or usability affected?

Comments:

The data quality was affected; see above. The data are considered usable with the applied qualifiers.

- e. Trip Blanks

- i. One trip blank reported per matrix, analysis and for each cooler containing volatile samples? (If not, enter explanation below.)

Yes  No  N/A  Comments:

Laboratory Report Date:

- ii. Is the cooler used to transport the trip blank and VOA samples clearly indicated on the COC?  
(If not, a comment explaining why must be entered below)

Yes  No  N/A  Comments:

Only one cooler was used.

- iii. All results less than LOQ and project specified objectives?

Yes  No  N/A  Comments:

- iv. If above LOQ or project specified objectives, what samples are affected?

Comments:

See above.

- v. Data quality or usability affected?

Comments:

The data quality and usability were not affected.

- f. Field Duplicate

- i. One field duplicate submitted per matrix, analysis and 10 project samples?

Yes  No  N/A  Comments:

Field duplicate pair *FL358-MW9-220628* and *FL358-MW100-220628* were submitted with this work order.

- ii. Submitted blind to lab?

Yes  No  N/A  Comments:

- iii. Precision – All relative percent differences (RPD) less than specified project objectives?  
(Recommended: 30% water, 50% soil)

$$\text{RPD (\%)} = \text{Absolute value of: } \frac{(R_1 - R_2)}{((R_1 + R_2)/2)} \times 100$$

Where  $R_1$  = Sample Concentration

$R_2$  = Field Duplicate Concentration

Yes  No  N/A  Comments:

The RPD for analytes (cis) 1,2-dichloroethene, trichloroethene, tetrachloroethene, and BOD were outside quality control limits.

Tetrachloroethene is affected by an equipment blank detection (see section 6.g.ii). Due to a laboratory QC error, BOD is already considered estimated and biased low (see section 7). The remaining results are considered estimated with no direction of bias (flagged with a “J”) for the duplicate pair.

Laboratory Report Date:

iv. Data quality or usability affected? (Use the comment box to explain why or why not.)

Comments:

Yes; see above.

g. Decontamination or Equipment Blank (If not applicable, a comment stating why must be entered below)?

Yes  No  N/A  Comments:

The equipment blank sample *Rinsate-220628* was submitted for volatile organics analysis.

i. All results less than LOQ and project specified objectives?

Yes  No  N/A  Comments:

Tetrachloroethene was detected above the PQL at 0.22 µg/L.

ii. If above LOQ or project specified objectives, what samples are affected?

Comments:

Tetrachloroethene was detected above the PQL and less than five times the blank detection in project samples *FL358-MW9-220628* and *FL358-MW100-220628*. These results are considered not detected, flagged as “UB” at the detected concentration.

Tetrachloroethene was detected at concentrations above ten times the blank concentration in project sample *FL358-MW13-220628*. This result is considered unaffected by the blank detection.

iii. Data quality or usability affected?

Comments:

Data quality is affected, see above. The data are considered usable, with the applied qualifiers.

7. Other Data Flags/Qualifiers (ACOE, AFCEE, Lab Specific, etc.)

a. Defined and appropriate?

Yes  No  N/A  Comments:

The seed control did not meet the method specification of 2ppm for BOD analysis in project samples *FL358-MW9-220628* and *FL358-MW100-220628*. These results are considered estimated and biased low (flagged with a “JL”).

**Laboratory Data Review Checklist**

Completed By:

Justin Risley, EIT

Title:

Engineering Staff

Date:

August 16, 2022

Consultant Firm:

Shannon & Wilson, Inc.

Laboratory Name:

OnSite Environmental, Inc.

Laboratory Report Number:

2206-332

Laboratory Report Date:

July 14, 2022

CS Site Name:

FL358

Laboratory Report Date:

**Note: Any N/A or No box checked must have an explanation in the comments box.**

1. Laboratory

a. Did an approved laboratory receive and perform all the submitted sample analyses?

Yes  No  N/A  Comments:

b. If the samples were transferred to another “network” laboratory or sub-contracted to an alternate laboratory, was the laboratory performing the analyses also approved?

Yes  No  N/A  Comments:

2. Chain of Custody (CoC)

a. CoC information completed, signed, and dated (including released/received by)?

Yes  No  N/A  Comments:

b. Correct analyses requested?

Yes  No  N/A  Comments:

3. Laboratory Sample Receipt Documentation

a. Sample/cooler temperature documented and within range at receipt (0° to 6° C)?

Yes  No  N/A  Comments:

b. Sample preservation acceptable – acidified waters, Methanol preserved VOC soil (GRO, BTEX, Volatile Chlorinated Solvents, etc.)?

Yes  No  N/A  Comments:

c. Sample condition documented – broken, leaking (Methanol), zero headspace (VOC vials)?

Yes  No  N/A  Comments:

The sample receipt form noted the samples arrived in good condition.

Laboratory Report Date:

- d. If there were any discrepancies, were they documented? For example, incorrect sample containers/preservation, sample temperature outside of acceptable range, insufficient or missing samples, etc.?

Yes  No  N/A  Comments:

No discrepancies were noted.

- e. Data quality or usability affected?

Comments:

The laboratories do not state an effect on the data quality or usability; please see the following sections for our assessment.

#### 4. Case Narrative

- a. Present and understandable?

Yes  No  N/A  Comments:

- b. Discrepancies, errors, or QC failures identified by the lab?

Yes  No  N/A  Comments:

OnSite Environmental Inc. noted the following:

Project sample *FL358-MW7-220629* had surrogate recoveries outside of laboratory control limits. This sample was re-run with similar results, indicating probable matrix interference.

The sample chosen for the MS/MSD had high native concentrations of methane; therefore, no meaningful recovery data could be obtained for the compound. Acetylene was recovered below laboratory control limits. The lab states that proper statistical control limits for this compound are still being developed; therefore, this should not be considered a true quality control failure. A SB/SBD was analyzed with this set and all parameters were within control limits. We note the SB/SBD is not reported; our assessment is based on the statement in the case narrative.

- c. Were all corrective actions documented?

Yes  No  N/A  Comments:

- d. What is the effect on data quality/usability according to the case narrative?

Comments:

The laboratory does not state an effect on the data quality or usability; please see the following sections for our assessment.

Laboratory Report Date:

5. Samples Results

a. Correct analyses performed/reported as requested on COC?

Yes  No  N/A  Comments:

--

b. All applicable holding times met?

Yes  No  N/A  Comments:

--

c. All soils reported on a dry weight basis?

Yes  No  N/A  Comments:

Soil samples were not submitted with this work order.

d. Are the reported LOQs less than the Cleanup Level or the minimum required detection level for the project?

Yes  No  N/A  Comments:

--

e. Data quality or usability affected?

Data quality or usability are not affected.

6. QC Samples

a. Method Blank

i. One method blank reported per matrix, analysis and 20 samples?

Yes  No  N/A  Comments:

--

ii. All method blank results less than limit of quantitation (LOQ) or project specified objectives?

Yes  No  N/A  Comments:

--

iii. If above LOQ or project specified objectives, what samples are affected?

Comments:

None.

Laboratory Report Date:

iv. Do the affected sample(s) have data flags? If so, are the data flags clearly defined?

Yes  No  N/A  Comments:

See above.

v. Data quality or usability affected?

Comments:

Data quality and usability are not affected.

b. Laboratory Control Sample/Duplicate (LCS/LCSD)

i. Organics – One LCS/LCSD reported per matrix, analysis and 20 samples?

Yes  No  N/A  Comments:

A spike blank and laboratory duplicate were reported for total organic carbon by method SM5310B.

ii. Metals/Inorganics – one LCS and one sample duplicate reported per matrix, analysis and 20 samples?

Yes  No  N/A  Comments:

A spike blank and laboratory duplicate were reported for ammonia by method SM4500-NH<sub>3</sub> D, nitrite by method EPA 353.2, and nitrate by method EPA 353.2.

A LCS and laboratory duplicate were reported for ferrous iron by method SM 3500-Fe B.

A laboratory duplicate was reported for total iron by method EPA 6010D and BOD by method SM 5210B.

iii. Accuracy – All percent recoveries (%R) reported and within method or laboratory limits and project specified objectives, if applicable?

Yes  No  N/A  Comments:

iv. Precision – All relative percent differences (RPD) reported and less than method or laboratory limits and project specified objectives, if applicable? RPD reported from LCS/LCSD, and or sample/sample duplicate.

Yes  No  N/A  Comments:

Am Test Inc. did not specify an RPD control limit; therefore, a control limit of 30% is assumed.

v. If %R or RPD is outside of acceptable limits, what samples are affected?

Comments:

N/A; see above.

Laboratory Report Date:

vi. Do the affected sample(s) have data flags? If so, are the data flags clearly defined?

Yes  No  N/A  Comments:

vii. Data quality or usability affected? (Use comment box to explain.)

Comments:

Data quality or usability has not been affected

c. Matrix Spike/Matrix Spike Duplicate (MS/MSD)

**Note: Leave blank if not required for project**

i. Organics – One MS/MSD reported per matrix, analysis and 20 samples?

Yes  No  N/A  Comments:

The laboratory reported an MS/MSD for volatile organics by method EPA 8260D and dissolved gases by method RSK 175.

The laboratory reported an MS for total organic carbon by method SM 5310B.

ii. Metals/Inorganics – one MS and one MSD reported per matrix, analysis and 20 samples?

Yes  No  N/A  Comments:

The laboratory reported an MS for ammonia by method SM4500-NH<sub>3</sub> D, nitrite by method EPA 353.2, and nitrate by method EPA 353.2.

The laboratory reported an MS/MSD for total iron by method EPA 6010D and ferrous iron by method SM 3500-Fe B.

iii. Accuracy – All percent recoveries (%R) reported and within method or laboratory limits and project specified objectives, if applicable?

Yes  No  N/A  Comments:

Due to the low spike concentration relative to the native concentration, methane was not meaningfully recoverable. Results are not affected.

Acetylene was recovered below and at the lower control limits for the MS and MSD respectively.

iv. Precision – All relative percent differences (RPD) reported and less than method or laboratory limits and project specified objectives, if applicable? RPD reported from MS/MSD, and or sample/sample duplicate.

Yes  No  N/A  Comments:

Laboratory Report Date:

- v. If %R or RPD is outside of acceptable limits, what samples are affected?

Comments:

The parent sample associated with the MS/MSD failure is not a part of this work order; therefore, no qualifications are required.

- vi. Do the affected sample(s) have data flags? If so, are the data flags clearly defined?

Yes  No  N/A  Comments:

See above.

- vii. Data quality or usability affected? (Use comment box to explain.)

Comments:

The data quality and usability were not affected; see above.

- d. Surrogates – Organics Only or Isotope Dilution Analytes (IDA) – Isotope Dilution Methods Only

- i. Are surrogate/IDA recoveries reported for organic analyses – field, QC and laboratory samples?

Yes  No  N/A  Comments:

- ii. Accuracy – All percent recoveries (%R) reported and within method or laboratory limits and project specified objectives, if applicable?

Yes  No  N/A  Comments:

Recovery of surrogate 1-butene in method RSK 175 was below laboratory control limits in project sample *FL358-MW7-220629*. This is likely due to matrix interference.

Detected results are considered estimated and biased low (flagged with a “JL”) and non-detect results are considered estimated (flagged with a “UJ”).

- iii. Do the sample results with failed surrogate/IDA recoveries have data flags? If so, are the data flags clearly defined?

Yes  No  N/A  Comments:

See above.

- iv. Data quality or usability affected?

Comments:

The data quality was affected; see above. The data are considered usable with the applied qualifiers.

- e. Trip Blanks

- i. One trip blank reported per matrix, analysis and for each cooler containing volatile samples? (If not, enter explanation below.)

Yes  No  N/A  Comments:

Laboratory Report Date:

- ii. Is the cooler used to transport the trip blank and VOA samples clearly indicated on the COC?  
(If not, a comment explaining why must be entered below)

Yes  No  N/A  Comments:

Only one cooler was used.

- iii. All results less than LOQ and project specified objectives?

Yes  No  N/A  Comments:

- iv. If above LOQ or project specified objectives, what samples are affected?

Comments:

See above.

- v. Data quality or usability affected?

Comments:

The data quality and usability were not affected.

- f. Field Duplicate

- i. One field duplicate submitted per matrix, analysis and 10 project samples?

Yes  No  N/A  Comments:

Field duplicate pairs were not submitted with this work order.

- ii. Submitted blind to lab?

Yes  No  N/A  Comments:

See above.

- iii. Precision – All relative percent differences (RPD) less than specified project objectives?  
(Recommended: 30% water, 50% soil)

$$\text{RPD (\%)} = \text{Absolute value of: } \frac{(R_1 - R_2)}{((R_1 + R_2)/2)} \times 100$$

Where  $R_1$  = Sample Concentration

$R_2$  = Field Duplicate Concentration

Yes  No  N/A  Comments:

- iv. Data quality or usability affected? (Use the comment box to explain why or why not.)

Comments:

N/A; see above.

## Laboratory Report Date:

- g. Decontamination or Equipment Blank (If not applicable, a comment stating why must be entered below)?

Yes  No  N/A  Comments:

The equipment blank sample *Rinsate-220629* was submitted for volatile organics analysis.

- i. All results less than LOQ and project specified objectives?

Yes  No  N/A  Comments:

Tetrachloroethene was detected above the PQL at 0.20 µg/L.

- ii. If above LOQ or project specified objectives, what samples are affected?

Comments:

Tetrachloroethene was detected above the PQL less than five times the blank detection in project sample *FL358-MW7-220629*. This result is considered not detected, flagged with a "UB" at the detected concentration.

Tetrachloroethene was not detected in the remaining project samples. These results are not affected by the blank detection.

- iii. Data quality or usability affected?

Comments:

Data quality is affected, see above. The data are considered usable with the applied qualifiers.

7. Other Data Flags/Qualifiers (ACOE, AFCEE, Lab Specific, etc.)

- a. Defined and appropriate?

Yes  No  N/A  Comments:

**Laboratory Data Review Checklist**

Completed By:

Justin Risley, EIT

Title:

Engineering Staff

Date:

August 16, 2022

Consultant Firm:

Shannon & Wilson, Inc.

Laboratory Name:

OnSite Environmental, Inc.

Laboratory Report Number:

2207-005

Laboratory Report Date:

July 14, 2022

CS Site Name:

FL358

Laboratory Report Date:

**Note: Any N/A or No box checked must have an explanation in the comments box.**

1. Laboratory

a. Did an approved laboratory receive and perform all the submitted sample analyses?

Yes  No  N/A  Comments:

b. If the samples were transferred to another “network” laboratory or sub-contracted to an alternate laboratory, was the laboratory performing the analyses also approved?

Yes  No  N/A  Comments:

2. Chain of Custody (CoC)

a. CoC information completed, signed, and dated (including released/received by)?

Yes  No  N/A  Comments:

b. Correct analyses requested?

Yes  No  N/A  Comments:

3. Laboratory Sample Receipt Documentation

a. Sample/cooler temperature documented and within range at receipt (0° to 6° C)?

Yes  No  N/A  Comments:

b. Sample preservation acceptable – acidified waters, Methanol preserved VOC soil (GRO, BTEX, Volatile Chlorinated Solvents, etc.)?

Yes  No  N/A  Comments:

c. Sample condition documented – broken, leaking (Methanol), zero headspace (VOC vials)?

Yes  No  N/A  Comments:

The sample receipt form noted the samples arrived in good condition.

Laboratory Report Date:

- d. If there were any discrepancies, were they documented? For example, incorrect sample containers/preservation, sample temperature outside of acceptable range, insufficient or missing samples, etc.?

Yes  No  N/A  Comments:

No discrepancies were noted.

- e. Data quality or usability affected?

Comments:

The laboratories do not state an effect on the data quality or usability; please see the following sections for our assessment.

#### 4. Case Narrative

- a. Present and understandable?

Yes  No  N/A  Comments:

- b. Discrepancies, errors, or QC failures identified by the lab?

Yes  No  N/A  Comments:

The laboratory case narratives do not note any discrepancies, errors, or QC failures.

- c. Were all corrective actions documented?

Yes  No  N/A  Comments:

Corrective actions were not noted as necessary.

- d. What is the effect on data quality/usability according to the case narrative?

Comments:

The laboratory does not state an effect on the data quality or usability; please see the following sections for our assessment.

#### 5. Samples Results

- a. Correct analyses performed/reported as requested on COC?

Yes  No  N/A  Comments:

- b. All applicable holding times met?

Yes  No  N/A  Comments:

Laboratory Report Date:

c. All soils reported on a dry weight basis?

Yes  No  N/A  Comments:

Soil samples were not submitted with this work order.

d. Are the reported LOQs less than the Cleanup Level or the minimum required detection level for the project?

Yes  No  N/A  Comments:

e. Data quality or usability affected?

Data quality or usability are not affected.

6. QC Samples

a. Method Blank

i. One method blank reported per matrix, analysis and 20 samples?

Yes  No  N/A  Comments:

ii. All method blank results less than limit of quantitation (LOQ) or project specified objectives?

Yes  No  N/A  Comments:

iii. If above LOQ or project specified objectives, what samples are affected?

Comments:

None.

iv. Do the affected sample(s) have data flags? If so, are the data flags clearly defined?

Yes  No  N/A  Comments:

See above.

v. Data quality or usability affected?

Comments:

Data quality and usability are not affected.

## Laboratory Report Date:

## b. Laboratory Control Sample/Duplicate (LCS/LCSD)

## i. Organics – One LCS/LCSD reported per matrix, analysis and 20 samples?

Yes  No  N/A  Comments:

A spike blank and laboratory duplicate were reported for total organic carbon by method SM5310B.

## ii. Metals/Inorganics – one LCS and one sample duplicate reported per matrix, analysis and 20 samples?

Yes  No  N/A  Comments:A spike blank and laboratory duplicate were reported for ammonia by method SM4500-NH<sub>3</sub> D, nitrite by method EPA 353.2, and nitrate by method EPA 353.2.

A LCS and laboratory duplicate were reported for ferrous iron by method SM 3500-Fe B.

A laboratory duplicate was reported for total iron by method EPA 6010D and BOD by method SM 5210B.

## iii. Accuracy – All percent recoveries (%R) reported and within method or laboratory limits and project specified objectives, if applicable?

Yes  No  N/A  Comments:

## iv. Precision – All relative percent differences (RPD) reported and less than method or laboratory limits and project specified objectives, if applicable? RPD reported from LCS/LCSD, and or sample/sample duplicate.

Yes  No  N/A  Comments:

Am Test Inc. did not specify an RPD control limit; therefore, a control limit of 30% is assumed.

## v. If %R or RPD is outside of acceptable limits, what samples are affected?

Comments:

N/A; see above.

## vi. Do the affected sample(s) have data flags? If so, are the data flags clearly defined?

Yes  No  N/A  Comments:

## vii. Data quality or usability affected? (Use comment box to explain.)

Comments:

Data quality or usability has not been affected

Laboratory Report Date:

c. Matrix Spike/Matrix Spike Duplicate (MS/MSD)

**Note: Leave blank if not required for project**

i. Organics – One MS/MSD reported per matrix, analysis and 20 samples?

Yes  No  N/A  Comments:

The laboratory reported an MS/MSD for volatile organics by method EPA 8260D and dissolved gases by method RSK 175.

The laboratory reported an MS for total organic carbon by method SM 5310B.

ii. Metals/Inorganics – one MS and one MSD reported per matrix, analysis and 20 samples?

Yes  No  N/A  Comments:

The laboratory reported an MS for ammonia by method SM4500-NH<sub>3</sub> D, nitrite by method EPA 353.2, and nitrate by method EPA 353.2.

The laboratory reported an MS/MSD for total iron by method EPA 6010D and ferrous iron by method SM 3500-Fe B.

iii. Accuracy – All percent recoveries (%R) reported and within method or laboratory limits and project specified objectives, if applicable?

Yes  No  N/A  Comments:

Due to the low spike concentration relative to the native concentration, methane was not meaningfully recoverable in the MS/MSD associated with method RSK 175. The remaining analytes were recovered below the laboratory control limits in both the MS and MSD.

Percent recovery for ferrous iron in the MSD associated with method SM 3500-Fe B was below laboratory control limits. We note the laboratory also performed a duplicate analysis on the same sample that resulted in recoveries within their limits; therefore, no qualification is required.

iv. Precision – All relative percent differences (RPD) reported and less than method or laboratory limits and project specified objectives, if applicable? RPD reported from MS/MSD, and or sample/sample duplicate.

Yes  No  N/A  Comments:

Laboratory Report Date:

- v. If %R or RPD is outside of acceptable limits, what samples are affected?

Comments:

The parent sample associated with the MS/MSD failure is project sample *FL358-MW6-220630*.

The methane spike added was much lower than the native concentration; therefore, no qualification is required.

Acetylene was detected in the parent sample and is, therefore, considered estimated with a low bias (flagged with a "JL"). Ethane and ethene were not detected in the parent sample; therefore, the results are considered estimated with no direction of bias (flagged with a "UJ").

- vi. Do the affected sample(s) have data flags? If so, are the data flags clearly defined?

Yes  No  N/A  Comments:

See above.

- vii. Data quality or usability affected? (Use comment box to explain.)

Comments:

The data quality is affected; see above. The data are considered usable with the applied qualifiers.

- d. Surrogates – Organics Only or Isotope Dilution Analytes (IDA) – Isotope Dilution Methods Only

- i. Are surrogate/IDA recoveries reported for organic analyses – field, QC and laboratory samples?

Yes  No  N/A  Comments:

- ii. Accuracy – All percent recoveries (%R) reported and within method or laboratory limits and project specified objectives, if applicable?

Yes  No  N/A  Comments:

Recovery of surrogate 1-butene in the MS/MSD associated with method RSK 175 was below laboratory control limits. The data affected by this recovery failure has already been qualified; see section 6.c.v.

- iii. Do the sample results with failed surrogate/IDA recoveries have data flags? If so, are the data flags clearly defined?

Yes  No  N/A  Comments:

- iv. Data quality or usability affected?

Comments:

The data quality and usability were not additionally affected; see above.

Laboratory Report Date:

## e. Trip Blanks

- i. One trip blank reported per matrix, analysis and for each cooler containing volatile samples?  
(If not, enter explanation below.)

Yes  No  N/A  Comments:

- ii. Is the cooler used to transport the trip blank and VOA samples clearly indicated on the COC?  
(If not, a comment explaining why must be entered below)

Yes  No  N/A  Comments:

Only one cooler was used.

- iii. All results less than LOQ and project specified objectives?

Yes  No  N/A  Comments:

- iv. If above LOQ or project specified objectives, what samples are affected?

Comments:

See above.

- v. Data quality or usability affected?

Comments:

The data quality and usability were not affected.

## f. Field Duplicate

- i. One field duplicate submitted per matrix, analysis and 10 project samples?

Yes  No  N/A  Comments:

Field duplicate pairs were not submitted with this work order.

- ii. Submitted blind to lab?

Yes  No  N/A  Comments:

See above.

Laboratory Report Date:

- iii. Precision – All relative percent differences (RPD) less than specified project objectives?  
(Recommended: 30% water, 50% soil)

$$\text{RPD (\%)} = \text{Absolute value of: } \frac{(R_1 - R_2)}{((R_1 + R_2)/2)} \times 100$$

Where  $R_1$  = Sample Concentration  
 $R_2$  = Field Duplicate Concentration

Yes  No  N/A  Comments:

- iv. Data quality or usability affected? (Use the comment box to explain why or why not.)

Comments:

N/A; see above.

- g. Decontamination or Equipment Blank (If not applicable, a comment stating why must be entered below)?

Yes  No  N/A  Comments:

The equipment blank sample *Rinsate-220630* was submitted for volatile organics analysis.

- i. All results less than LOQ and project specified objectives?

Yes  No  N/A  Comments:

Tetrachloroethene was detected above the PQL at 0.22 µg/L.

- ii. If above LOQ or project specified objectives, what samples are affected?

Comments:

Tetrachloroethene was detected at concentrations greater than ten times the blank detection in the associated project samples. These results are not considered affected by the blank detection.

- iii. Data quality or usability affected?

Comments:

Data quality/usability is not affected, see above.

7. Other Data Flags/Qualifiers (ACOE, AFCEE, Lab Specific, etc.)

- a. Defined and appropriate?

Yes  No  N/A  Comments:

# Important Information

About Your Geotechnical/Environmental Report

IMPORTANT INFORMATION

## CONSULTING SERVICES ARE PERFORMED FOR SPECIFIC PURPOSES AND FOR SPECIFIC CLIENTS.

Consultants prepare reports to meet the specific needs of specific individuals. A report prepared for a civil engineer may not be adequate for a construction contractor or even another civil engineer. Unless indicated otherwise, your consultant prepared your report expressly for you and expressly for the purposes you indicated. No one other than you should apply this report for its intended purpose without first conferring with the consultant. No party should apply this report for any purpose other than that originally contemplated without first conferring with the consultant.

## THE CONSULTANT'S REPORT IS BASED ON PROJECT-SPECIFIC FACTORS.

A geotechnical/environmental report is based on a subsurface exploration plan designed to consider a unique set of project-specific factors. Depending on the project, these may include the general nature of the structure and property involved; its size and configuration; its historical use and practice; the location of the structure on the site and its orientation; other improvements such as access roads, parking lots, and underground utilities; and the additional risk created by scope-of-service limitations imposed by the client. To help avoid costly problems, ask the consultant to evaluate how any factors that change subsequent to the date of the report may affect the recommendations. Unless your consultant indicates otherwise, your report should not be used (1) when the nature of the proposed project is changed (for example, if an office building will be erected instead of a parking garage, or if a refrigerated warehouse will be built instead of an unrefrigerated one, or chemicals are discovered on or near the site); (2) when the size, elevation, or configuration of the proposed project is altered; (3) when the location or orientation of the proposed project is modified; (4) when there is a change of ownership; or (5) for application to an adjacent site. Consultants cannot accept responsibility for problems that may occur if they are not consulted after factors that were considered in the development of the report have changed.

## SUBSURFACE CONDITIONS CAN CHANGE.

Subsurface conditions may be affected as a result of natural processes or human activity. Because a geotechnical/environmental report is based on conditions that existed at the time of subsurface exploration, construction decisions should not be based on a report whose adequacy may have been affected by time. Ask the consultant to advise if additional tests are desirable before construction starts; for example, groundwater conditions commonly vary seasonally.

Construction operations at or adjacent to the site and natural events such as floods, earthquakes, or groundwater fluctuations may also affect subsurface conditions and, thus, the continuing adequacy of a geotechnical/environmental report. The consultant should be kept apprised of any such events and should be consulted to determine if additional tests are necessary.

## MOST RECOMMENDATIONS ARE PROFESSIONAL JUDGMENTS.

Site exploration and testing identifies actual surface and subsurface conditions only at those points where samples are taken. The data were extrapolated by your consultant, who then applied judgment to render an opinion about overall subsurface conditions. The actual interface between materials may be far more gradual or abrupt than your report indicates. Actual conditions in areas not sampled may differ from those predicted in your report. While nothing can be done to prevent such situations, you and your consultant can work together to help reduce their impacts. Retaining

your consultant to observe subsurface construction operations can be particularly beneficial in this respect.

### A REPORT'S CONCLUSIONS ARE PRELIMINARY.

The conclusions contained in your consultant's report are preliminary, because they must be based on the assumption that conditions revealed through selective exploratory sampling are indicative of actual conditions throughout a site. Actual subsurface conditions can be discerned only during earthwork; therefore, you should retain your consultant to observe actual conditions and to provide conclusions. Only the consultant who prepared the report is fully familiar with the background information needed to determine whether or not the report's recommendations based on those conclusions are valid and whether or not the contractor is abiding by applicable recommendations. The consultant who developed your report cannot assume responsibility or liability for the adequacy of the report's recommendations if another party is retained to observe construction.

### THE CONSULTANT'S REPORT IS SUBJECT TO MISINTERPRETATION.

Costly problems can occur when other design professionals develop their plans based on misinterpretation of a geotechnical/environmental report. To help avoid these problems, the consultant should be retained to work with other project design professionals to explain relevant geotechnical, geological, hydrogeological, and environmental findings, and to review the adequacy of their plans and specifications relative to these issues.

### BORING LOGS AND/OR MONITORING WELL DATA SHOULD NOT BE SEPARATED FROM THE REPORT.

Final boring logs developed by the consultant are based upon interpretation of field logs (assembled by site personnel), field test results, and laboratory and/or office evaluation of field samples and data. Only final boring logs and data are customarily included in geotechnical/environmental reports. These final logs should not, under any circumstances, be redrawn for inclusion in architectural or other design drawings, because drafters may commit errors or omissions in the transfer process.

To reduce the likelihood of boring log or monitoring well misinterpretation, contractors should be given ready access to the complete geotechnical engineering/environmental report prepared or authorized for their use. If access is provided only to the report prepared for you, you should advise contractors of the report's limitations, assuming that a contractor was not one of the specific persons for whom the report was prepared, and that developing construction cost estimates was not one of the specific purposes for which it was prepared. While a contractor may gain important knowledge from a report prepared for another party, the contractor should discuss the report with your consultant and perform the additional or alternative work believed necessary to obtain the data specifically appropriate for construction cost estimating purposes. Some clients hold the mistaken impression that simply disclaiming responsibility for the accuracy of subsurface information always insulates them from attendant liability. Providing the best available information to contractors helps prevent costly construction problems and the adversarial attitudes that aggravate them to a disproportionate scale.

### READ RESPONSIBILITY CLAUSES CLOSELY.

Because geotechnical/environmental engineering is based extensively on judgment and opinion, it is far less exact than other design disciplines. This situation has resulted in wholly unwarranted claims

being lodged against consultants. To help prevent this problem, consultants have developed a number of clauses for use in their contracts, reports, and other documents. These responsibility clauses are not exculpatory clauses designed to transfer the consultant's liabilities to other parties; rather, they are definitive clauses that identify where the consultant's responsibilities begin and end. Their use helps all parties involved recognize their individual responsibilities and take appropriate action. Some of these definitive clauses are likely to appear in your report, and you are encouraged to read them closely. Your consultant will be pleased to give full and frank answers to your questions.

**The preceding paragraphs are based on information  
provided by the GBA, Silver Spring, Maryland**

IMPORTANT INFORMATION

**APPENDIX E**  
**2022 Hydraulic Conductivity Field Testing Methodology**  
**and Analysis**

## APPENDIX E 2022 HYDRAULIC CONDUCTIVITY FIELD TESTING METHODOLOGY AND ANALYSIS

### SLUG TESTING

Monitoring wells FL358-MW5A, FL358-MW5B, FL358-MW6, and FL358-MW14 were tested to measure the horizontal hydraulic conductivity of the soil deposits in which each well is completed. Slug testing of the four wells was performed on July 20, 2022. Hydraulic conductivity was calculated using the Bouwer and Rice (1976) method. Plots of two representative slug test responses and type curves analyzed per well are presented in Figures E-1 through E-4. A total of three rising and three falling head tests were conducted for each well and the average value is reported as the hydraulic conductivity in Table E-1 below.

#### Field Procedures

Each slug test was performed in two stages, resulting in a falling head stage, followed by a rising head stage:

1. **Falling Head Stage.** A slug (weighted 5-foot length of sealed PVC casing) of known volume was rapidly lowered into the well, causing displacement of the water level, which rose almost instantaneously above its initial level, and the water level in the well was monitored until it returned (fell) to the approximate initial water level.
2. **Rising Head Stage.** The slug was then rapidly removed, causing the water level to fall instantaneously below its initial level and the water level in the well was monitored until it returned (rose) to the approximate initial water level.

Groundwater levels were measured as hydrostatic pressures by using an unvented 30-psi PT2X vented water-level sensor comprising a piezoelectric pressure transducer and combined datalogger. The datalogger was programmed to record hydrostatic submergence pressure 8-per-second intervals, supplemented with manual electronic water-level meter readings before, during, and after each aquifer slug test.

#### Data Interpretation

The tested wells exhibited an over-damped response typical of moderately permeable formations where the well screen is fully submerged in an unconfined aquifer. The representative rising and falling hydraulic head responses during each test (as shown on Figures E-1 through E-4) show gradual equilibration back to static water levels, which was interpreted as drainage of the displaced water between the aquifer and monitoring well (Bouwer 1989).

#### Data Analysis

The log-linear slope of each rising or falling head test was determined from the data plots (Figures E-1 through E-4) and used (in the Bouwer & Rice [1976] method analysis) to calculate the hydraulic conductivity of the formation below the water table at each well, assuming unconfined aquifer conditions.

The bottom of the aquifer was assumed to be between 40 feet below ground surface for each well; the depth to the bottom of the aquifer was selected based on the depth to the hard silt that represents the confining unit. Hard silt typically has a significantly lower hydraulic conductivity than the silty sand and gravel mixtures across the well screen depth intervals and interpreted as an aquitard.

## Results

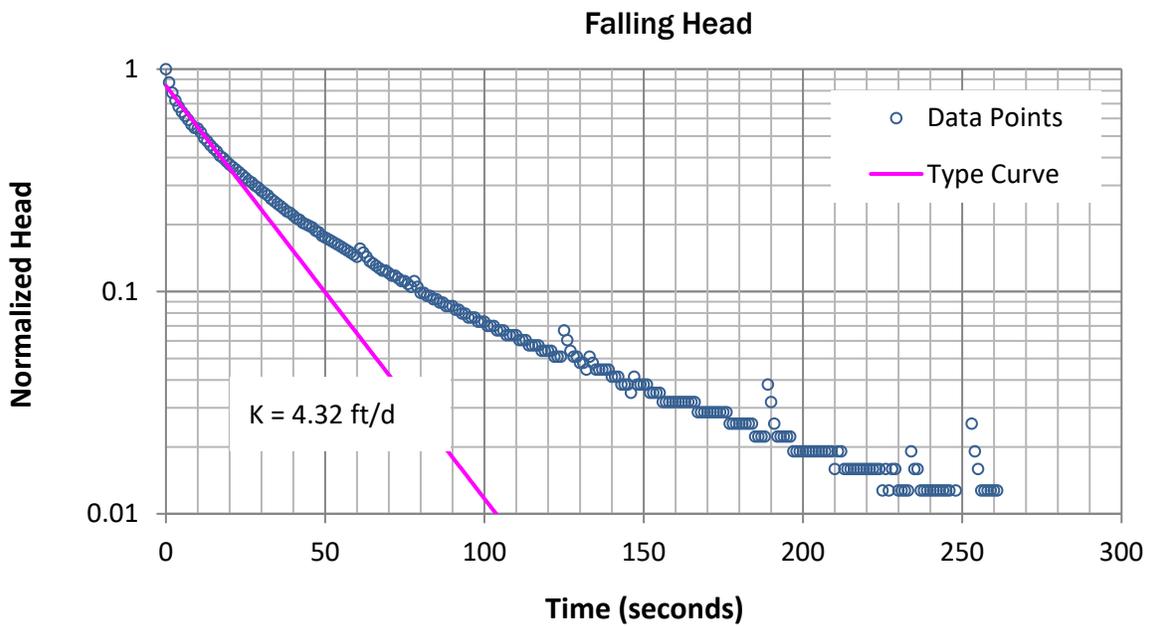
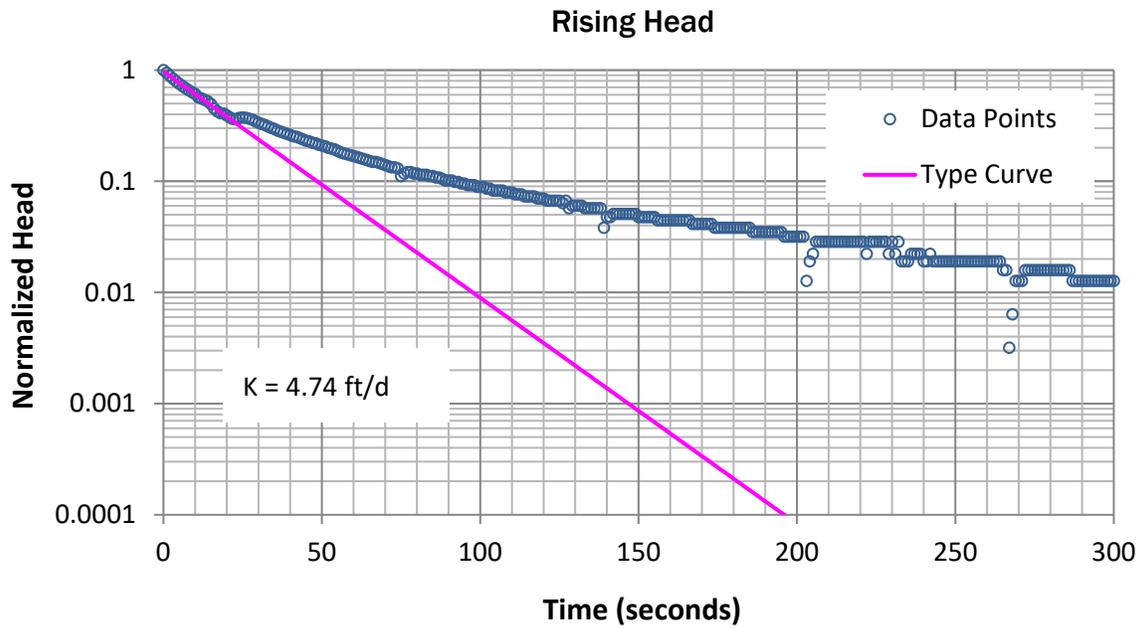
Representative graphs of the slug test analyses are shown on Figures E-1 through E-4. The average hydraulic conductivities based on the slug testing are shown below in Table E-1; hydraulic conductivity values ranged between 0.13 and 4.06 feet per day.

**TABLE E-1: SLUG TEST RESULTS**

Well ID	Number of Tests	Approximate Saturated Thickness	Average Hydraulic Conductivity	
		Feet	Feet per day	Centimeters/second
FL358-MW5A	3	16	4.06	$1.4 \times 10^{-3}$
FL358-MW5B	3	30	1.67	$5.9 \times 10^{-4}$
FL358-MW6	3	27	0.51	$1.8 \times 10^{-4}$
FL358-MW14	3	27	0.13	$4.7 \times 10^{-5}$

## References

Bouwer, H., and Rice, R.C., 1976. A Slug Test for Determining Hydraulic Conductivity of Unconfined Aquifers with Completely or Partially Penetrating Wells. *Water Resources Research*, 12 (3), 423-428.



04082-039-03 Date Exported: 08/25/2023

**Notes:**

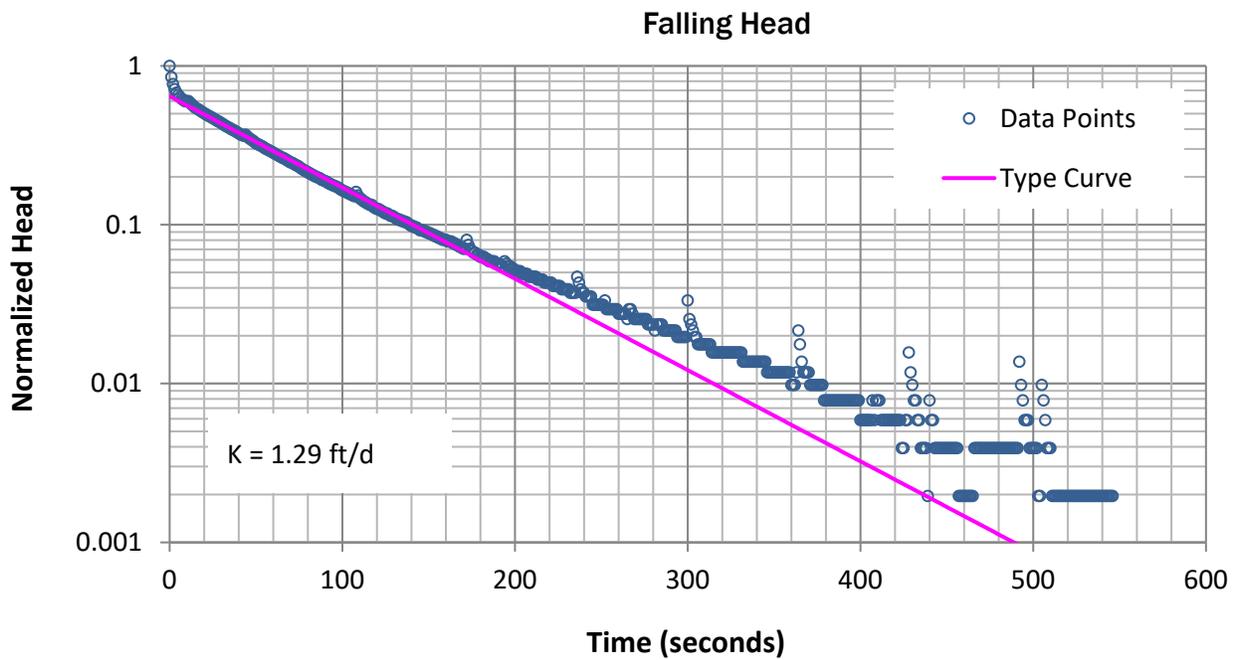
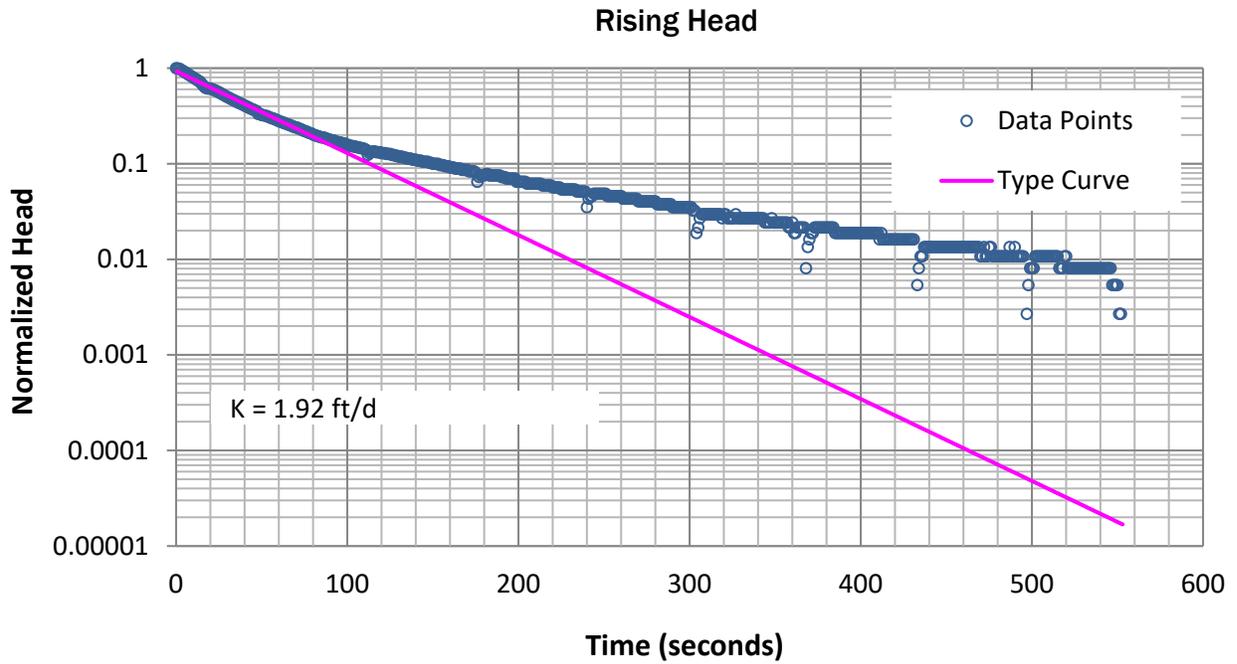
1. Water level response was measured with an unvented 0-30psi INW PT2X pressure transducer recording 8 times per second
2. Aquifer is assumed to be unconfined
3. Saturated thickness is assumed to be approximately 16 feet
4. Well is screened from 21 to 26 feet below ground surface
5. Static water level was approximately 11.25 feet below ground surface

**Example Aquifer Slug Test at FL358-MW5A**

Remedial Investigation  
Y Pay Mor Site  
Federal Way, Washington



**Figure E-1**



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**Notes:**

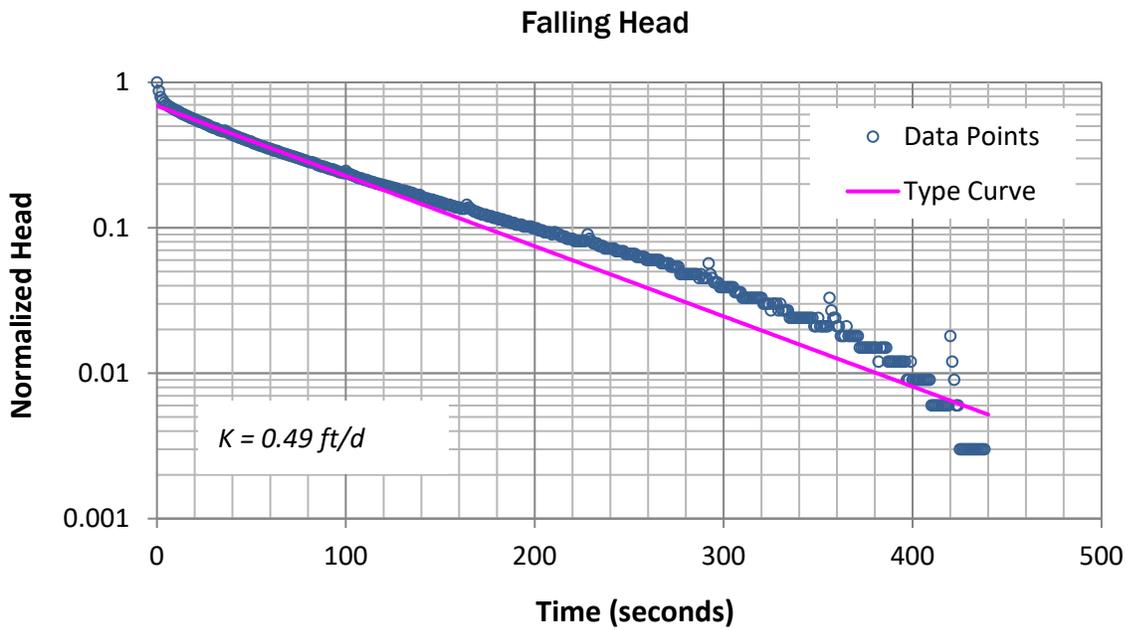
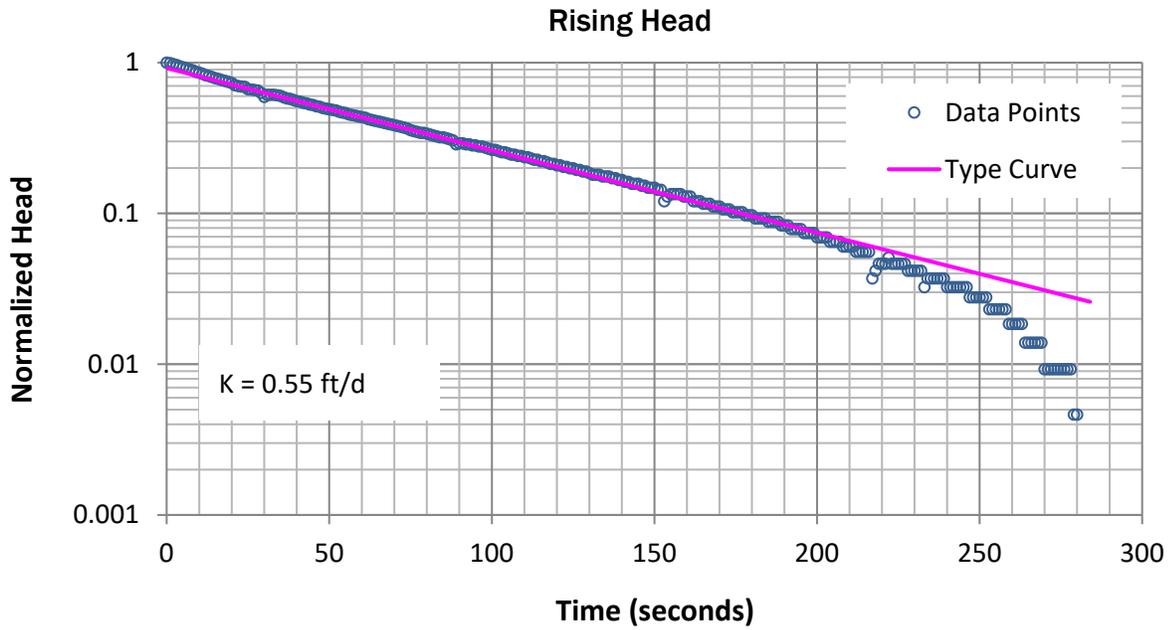
1. Water level response was measured with an unvented 0-30psi INW PT2X pressure transducer recording 8 times per second
2. Aquifer is assumed to be unconfined
3. Saturated thickness is assumed to be approximately 30 feet
4. Well is screened from 32 to 37 feet below ground surface
5. Static water level was approximately 10.45 feet below ground surface

**Example Aquifer Slug Test at FL358-MW5B**

Remedial Investigation  
Y Pay Mor Site  
Federal Way, Washington



**Figure E-2**

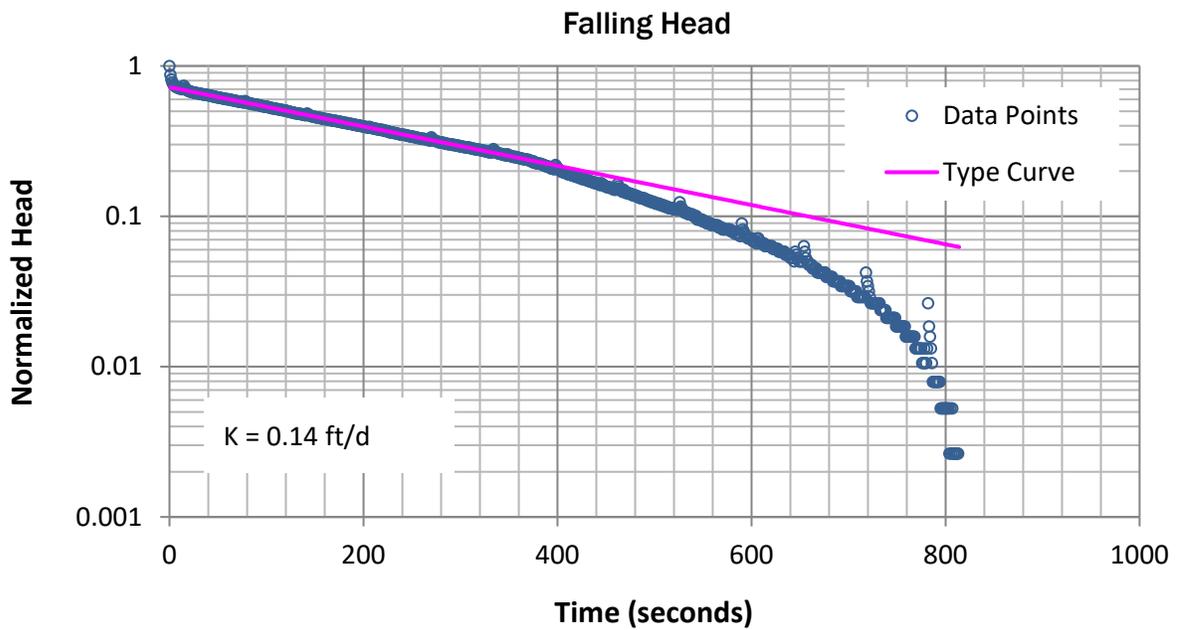
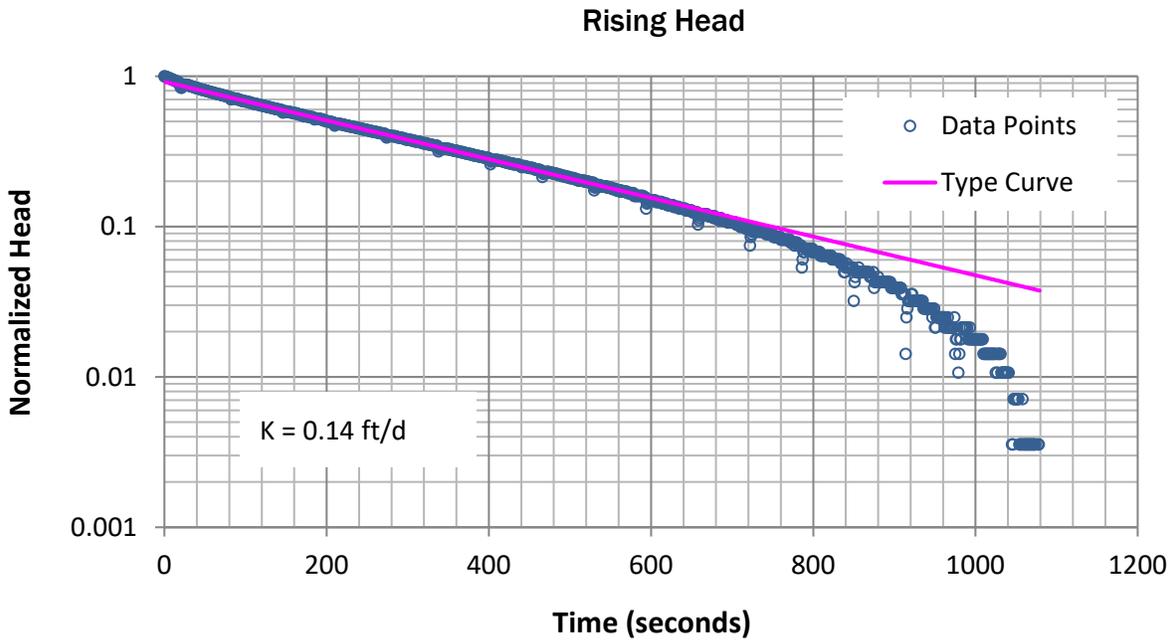


04082-039-03 Date Exported: 08/25/2023

**Notes:**

1. Water level response was measured with an unvented 0-30psi INW PT2X pressure transducer recording 8 times per second
2. Aquifer is assumed to be unconfined
3. Saturated thickness is assumed to be approximately 27 feet
4. Well is screened from 17 to 37 feet below ground surface
5. Static water level was approximately 12.72 feet below ground surface

<b>Example Aquifer Slug Test at FL358-MW6</b>	
Remedial Investigation Y Pay Mor Site Federal Way, Washington	
	<b>Figure E-3</b>



04082-039-03 Date Exported: 08/25/2023

**Notes:**

1. Water level response was measured with an unvented 0-30psi INW PT2X pressure transducer recording 8 times per second
2. Aquifer is assumed to be unconfined
3. Saturated thickness is assumed to be approximately 27 feet
4. Well is screened from 19 to 39 feet below ground surface
5. Static water level was approximately 13.21 feet below ground surface

<b>Aquifer Slug Test at FL358-MW14</b>	
Remedial Investigation Y Pay Mor Site Federal Way, Washington	
	<b>Figure E-4</b>

**APPENDIX F**  
**Terrestrial Ecological Evaluation**

## APPENDIX F TERRESTRIAL ECOLOGICAL EVALUATION

A terrestrial ecological evaluation (TEE) was conducted in accordance with MTCA (WAC 173-340-7490). The purpose of the TEE is to evaluate whether hazardous substances detected in soil at a site pose a threat to terrestrial receptors (e.g., plants, soil biota, and wildlife). The TEE is described in the following sections and summarized in the Terrestrial Ecological Evaluation Form and Table 749-1 (Appendix E).

WAC 173-340-7491(1) outlines four criteria for determining that no further evaluation is required. A TEE is not required if a site meets any of these exclusion criteria. The response for the criteria is shown in italics

1. "All soil contaminated with hazardous substances, is, or will be, located below the point of compliance." The standard point of compliance is 15 feet and the conditional point of compliance is 6 feet. *The site meets this criteria because chemicals of concern (COCs) are present at depths greater than 15 feet below the ground surface.*
2. "All soil contaminated with hazardous substances is, or will be, covered by buildings, paved roads, pavement, or other physical barriers that will prevent plants or wildlife from being exposed to the soil contamination." *A portion of the Site will remain uncovered until it is developed. The development plans are not known. The Site does not meet this criteria at this time.*
3. "There is less than 1.5 acres of contiguous undeveloped land on the site or within 500 feet of any area of the site." *Such areas surrounding the Site are already developed or currently under redevelopment. The Site meets this criteria.*
4. "Concentrations of hazardous substances in soil do not exceed natural background levels." *Background levels do not apply to COCs on the Site. The Site does not meet this criteria.*

The Site qualifies for Exclusion 1 and 3.

**APPENDIX G**  
**Report Limitations and Guidelines for Use**

## **APPENDIX G**

### **REPORT LIMITATIONS AND GUIDELINES FOR USE<sup>7</sup>**

This appendix provides information to help you manage your risks with respect to the use of this report. Please confer with GeoEngineers if you need to know more about how these “Report Limitations and Guidelines for Use” apply to your project or property.

#### **Read These Provisions Closely**

It is important to recognize that environmental engineering and geoscience practices (geotechnical engineering, geology and environmental science) are less exact than other engineering and natural science disciplines. GeoEngineers includes these explanatory “limitations” provisions in our reports to help reduce the risk of misunderstandings or unrealistic expectations that lead to disappointments, claims and disputes.

#### **Environmental Services Are Performed for Specific Purposes, Persons and Projects**

This report has been prepared for Sound Transit. Sound Transit may distribute copies of this report to South County Transit Partners and other authorized agents and regulatory agencies as may be required for the project. This report is not intended for use by others, and the information contained herein is not applicable to other sites.

GeoEngineers structures its services to meet the specific needs of its clients. For example, an ESA study conducted for a property owner may not fulfill the needs of a prospective purchaser of the same property. Because each environmental study is unique, each environmental report is unique, prepared solely for the specific client and property. Use of this report is not recommended for any purpose or project other than as expressly stated in this report.

#### **This Environmental Report is Based on a Unique Set of Project-Specific Factors**

This report applies to the FL358 parcel in Federal Way, Washington. GeoEngineers considered a number of unique, project-specific factors when establishing the scope of services for this project and report. Unless GeoEngineers specifically indicates otherwise, do not rely on this report if it was:

- not prepared for you,
- not prepared for your Project,
- not prepared for the specific site explored, or
- completed before Project changes were made.

If changes to the Project or property occur after the date of this report, GeoEngineers cannot be responsible for any consequences of such changes in relation to this report unless we have been given the opportunity to review our interpretations and recommendations in the context of such changes. Based on that review, we can provide written modifications or confirmation, as appropriate.

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<sup>7</sup> Developed based on material provided by GBA, GeoProfessional Business Association; [www.geoprofessional.org](http://www.geoprofessional.org).

### **Reliance Conditions for Third Parties**

This report was prepared for the exclusive use of the party(ies) to whom this report is addressed. No other party may rely on the product of our services unless we agree to such reliance in advance and in writing. Within the limitations of the agreed Project scope, schedule and budget, our services have been executed in accordance with our Agreement with the Client and generally accepted environmental practices in this area at the time this report was prepared.

### **Understand That Geotechnical Issues Have Not Been Addressed**

Unless geotechnical engineering was specifically included in our scope of service, this report does not provide any geotechnical findings, conclusions, or recommendations, including but not limited to, the suitability of subsurface materials for construction purposes.

### **Do Not Separate Documentation from the Report**

Environmental reports often include supplemental documentation, such as maps, figures and table. Do not separate such documentation from the report. Further, do not, and do not permit any other party to redraw or modify any of the supplemental documentation for incorporation into other professionals' instruments of service.

### **Environmental Regulations Change and Evolve**

Some substances may be present in the vicinity of the subject property in quantities or under conditions that may have led, or may lead, to contamination of the subject property, but are not included in current local, state or federal regulatory definitions of hazardous substances or do not otherwise present current potential liability. GeoEngineers cannot be responsible if the standards for appropriate inquiry, or regulatory definitions of hazardous substances, change or if more stringent environmental standards are developed in the future.

### **Uncertainty May Remain Even After This Remedial Investigation is Completed**

Performance of a Remedial Investigation is intended to reduce uncertainty regarding the potential for contamination in connection with a property, but no investigation can wholly eliminate that uncertainty. Our interpretation of subsurface conditions in this study is based on field observations and chemical analytical data from widely spaced sampling locations. It is always possible that contamination exists in areas that were not explored, sampled or analyzed.

### **Subsurface Conditions Can Change**

This environmental report is based on conditions that existed at the time the study was performed. The findings and conclusions of this report may be affected by the passage of time, by man-made events such as construction on or adjacent to the subject property, by new releases of hazardous substances, new information or technology that become available subsequent to the report date, or by natural events such as floods, earthquakes, slope instability or groundwater fluctuations. Please contact GeoEngineers before applying this report for its intended purpose so that GeoEngineers may evaluate whether changed conditions affect the continued applicability of the report.

## **Soil and Groundwater End Use**

The cleanup levels referenced in this report are site- and situation-specific. The cleanup levels may not be applicable for other properties or for other on-site uses of the affected soil and/or groundwater. Note that hazardous substances may be present in some of the on-site soil and/or groundwater at detectable concentrations that are less than the referenced cleanup levels. GeoEngineers should be contacted prior to the export of soil or groundwater from the subject property or reuse of the affected soil or groundwater on-site to evaluate the potential for associated environmental liabilities. GeoEngineers will not assume responsibility for potential environmental liability arising out of the transfer of soil and/or groundwater from the subject property to another location, or the reuse of such soil and/or groundwater on-site in any instances that we did not recommend, know of, or control.

## **Most Environmental Findings Are Professional Opinions**

Our interpretations of subsurface conditions are based on field observations and chemical analytical data from widely spaced sampling locations at the subject property. Site exploration identifies subsurface conditions only at those points where subsurface tests are conducted or samples are taken. GeoEngineers reviewed field and laboratory data and then applied its professional judgment to render an informed opinion about subsurface conditions throughout the property. Actual subsurface conditions may differ significantly from those indicated in this report. Our report, conclusions and interpretations should not be construed as a warranty of the subsurface conditions.

## **Do Not Redraw the Exploration Logs**

Environmental scientists prepare final boring and testing logs based upon their interpretation of field logs and laboratory data. To prevent errors or omissions, the logs included in an environmental report should never be redrawn for inclusion in other design documents. Only photographic or electronic reproduction that preserves the entire original boring log is acceptable, but separating logs from the report can create increase the risk of potential misinterpretation.

## **Biological Pollutants**

GeoEngineers' Scope of Work specifically excludes the investigation, detection, prevention or assessment of the presence of Biological Pollutants. Accordingly, this report does not include any interpretations, recommendations, findings or conclusions regarding the detecting, assessing, preventing or abating of Biological Pollutants, and no conclusions or inferences should be drawn regarding Biological Pollutants as they may relate to this Project. The term "Biological Pollutants" includes, but is not limited to, molds, fungi, spores, bacteria and viruses, and/or any of their byproducts.

A Client that desires these specialized services is advised to obtain them from a consultant who offers services in this specialized field.

## **Information Provided by Others**

GeoEngineers has relied upon certain data or information provided or compiled by others in the performance of our services. Although we use sources that we reasonably believe to be trustworthy, GeoEngineers cannot warrant or guarantee the accuracy or completeness of information provided or compiled by others.